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British Museum (Nat. Hist.). Dept. of Zoology

CATALOGUE

OF THE

SELOUS COLLECTION

OF

BIG GAME

IN THE

BRITISH MUSEUM (NATURAL HISTORY).

BY

J. G. DOLLMAN, B.A.

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PREFACE.

By the kind permission of the Editor, the following obituary notice is reproduced, with some omissions and verbal alterations, from *The Times* of January 8th, 1917.

"Captain F. C. Selous, D.S.O., the famous South African explorer and big game hunter, was killed in action in East Africa on January 4th at the age of 65. Last September he was awarded the D.S.O. 'for conspicuous gallantry, resource and endurance,' the official report adding that he set a magnificent example to all ranks, and that the value of his services with his battalion could not be overestimated.

Captain Frederick Courteney Selous was born in London on December 31, 1851. He was educated at Rugby and afterwards at Neuchâtel and Wiesbaden. At the age of 19 he left England with £400 in his pocket, determined to earn his living as a professional elephant hunter. With this object he made his way to the Kimberley diamond fields, then recently discovered. On learning that the right season of the year for a trip to the interior was not due for some months, young Selous joined a trading expedition into Griqualand. In 1872 he at last set forth for the interior, that is, the territory now known as Southern Rhodesia, then terrorized by the Matabele and their martial chief Lobengula. Without the permission of this monarch no one might enter Matabeleland or the neighbouring territories. Selous approached Lobengula about the matter, and the king was pleased to jest at

his petitioner's youthful appearance and to regard the idea of his attacking an elephant with derision. He gave the desired permission, which was taken advantage of promptly; not only did Selous bag many elephants before he came of age, but by the time he was five-and-twenty he was known far and wide in South Africa as one of the most successful ivory hunters of the day.

About this time many of the Boer elephant hunters were giving up the profession; the elephants had given up their old haunts of the open veld and the herds had retreated to the forest country. Here the use of horses was impossible, and malarial and other fevers took toll of the hunters; a few of the bolder spirits made up their minds to stick to elephant hunting, and it was among these hardy and experienced men that Selous speedily made a great reputation for courage, bushcraft and endurance. A man of beautiful proportions, with a chest of extraordinary depth and breadth, he is described as the best white runner that the Matabele had ever seen, and more than once he owed his life to his power of sprinting, jumping and swerving. The life of constant hardship toughened him, and he seldom suffered from fever.

Until 1881 Selous devoted himself mainly to elephant hunting, save for one holiday to England in 1875. In the former year he returned home for the second time, and shortly afterwards published 'A Hunter's Wanderings in Africa,' a book which ran through five editions, and took rank immediately among the classical works on African hunting. His keen interest in topography led to a succession of contributions to the Journal of the Royal Geographical Society, which in due time awarded him its gold medal. By the end of 1881 he was back at the Cape, and for the next six years wandered about the Matabele and other territory to the Zambesi, devoting himself mainly to procuring specimens of the African fauna for museums and private collections at home. Many of the finest specimens to be seen in the Natural History Museum were procured by Selous during these years.

In 1888, in passing through the Mashukulumbwi territory, Selous was set upon by that tribe; his caravan was plundered, many of his followers were killed, and he himself, escaping with

difficulty, made his way back in the last stages of exhaustion. Early in 1890 he led the pioneer expedition of the Chartered Company into Mashonaland, and so saved that valuable country from Portuguese annexation.

The next two years were spent on surveying and similar work for the Chartered Company, and in 1892 Selous returned to England. In 1893 he published 'Travel and Adventure in South-East Africa,' which contained not only an account of his many adventures since the publication of his former book, but also glowing descriptions of the potentialities of Mashonaland and Manicaland. Returning to Rhodesia in the same year, he assisted in the suppression of the first Matabele insurrection; he then came home, as he thought, for good, and soon afterwards married Marie Catherine Gladys (daughter of the late Canon Maddy) who survives him. In 1895 he returned to Rhodesia with his wife to take up the management of an estate, and was thus in time to serve through the second Matabele War, during which his homestead was burnt by the rebels. In 1896 he embodied these experiences, together with a review of the causes of the Matabele wars and of the resources of Charterland, in a book entitled 'Sunshine and Storm in Rhodesia.'

From this time onwards Selous gratified his ruling passion, big-game shooting, rather as an amateur than as a professional. In 1894–5 he visited Asia Minor on a hunting tour, and in 1897 and 1898 he made two trips to the Rocky Mountains. In 1900, 1901, and 1905 he shot in Newfoundland. In 1904 and 1906 he was on the Macmillan River in the Yukon territory of North-Western Canada. In later years he once more turned his attention to Africa, this time to British East Africa and the Nile. Throughout his career Selous was much more than merely a successful game-shooter. Wherever he went he took the deepest interest in the habits and personality of all animals encountered. Keen observation, indefatigable patience, and a retentive memory combined to make him a field naturalist of very exceptional excellence; and these qualities, together with his enormous experience, raised him to the position of acknowledged *doyen* of the whole tribe of

modern hunters. In 1909–1910 he organized and accompanied Mr. Roosevelt's hunting expedition in British East Africa.

In one of his later books, 'African Nature Notes and Reminiscences,' Selous summarized his vast stores of knowledge about many of the noblest of the African wild game; and he wrote also two books dealing with his adventures in Asia Minor and in North America. All his books are written in a spirit of transparent honesty and in a simple and direct style, reflecting the character of the author, whose straightforwardness, integrity, hospitality, and kindness of heart were as well known to hosts of friends as the qualities which made him so successful a hunter. At his house at Worplesdon he built a special museum for his numerous trophies; and nothing pleased him better than to show visitors over this building, except, perhaps, the acquisition of fresh additions to it."

A memorial to Selous was presented to the Natural History Museum by the subscribers, and was unveiled at a public ceremony on June 10th, 1920. It is the work of the late Mr. W. R. Colton, R.A., and consists of a bust in bronze in a granite setting with a plaque below depicting some of the better known species of African Big Game. The stone is a block of syenite from Bon Accord Quarry, presented by the Union Government of South Africa.

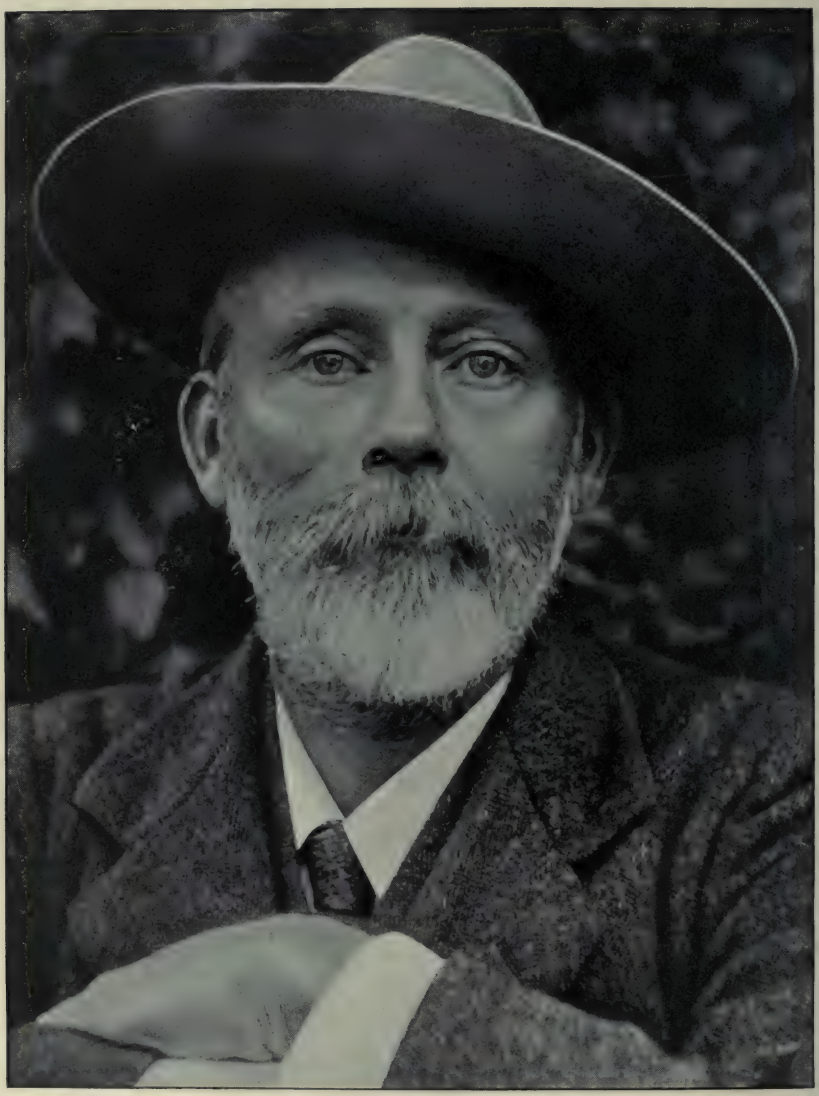
Selous gave the Museum a number of Big Game and other mammals, but his main collection was presented by Mrs. Selous in 1919. The majority of the specimens are heads of adult males, and these have been arranged on the walls of the corridors on the first floor of the building under the supervision of Captain J. G. Dollman, who has written the Catalogue, which it is hoped may prove of interest and utility to sportsmen.

Some extracts from Selous' books "A Hunter's Wanderings in Africa" and "Great and Small Game of Africa" have been reproduced by the kind permission of the publishers, Macmillan

and Co. Ltd. and Rowland Ward Ltd., respectively. The Zoological Society of London has allowed the reprinting of extracts from two papers by Selous that appeared in the 'Proceedings' for 1881. The thanks of the Trustees are also due to Mr. Leo Weinthal, O.B.E., for permission to reproduce the excellent portrait of Selous, which was taken by him in 1906.

C. TATE REGAN,
Keeper of Zoology.

British Museum (Natural History),
November 26, 1921.



FREDERICK COURTENEY SELOUS.

Portrait study by Leo Weinthal—1906.

CATALOGUE

OF THE

SELOUS COLLECTION

OF

BIG GAME.

INTRODUCTION.

THE specimens of Big Game and other Mammals dealt with in this Catalogue were shot by the late Captain F. C. Selous, D.S.O., between the years 1870 and 1916, and were presented to the Museum by Mrs. Selous in 1919. The most important of the expeditions made by Selous during this period and the number of specimens collected and preserved in the Collection are shown in the following Table:—

Year.	Locality.	Specimens.
1870	Bavaria	3
1871–1875	South Africa	20
1876–1881	South Africa	54
1881–1892	South Africa	89
1893	South Africa (1st Matabili War)	—
1894	Isle of Mull	1
1894–1895	Asia Minor	6
1895–1896	South Africa	30
1897	Asia Minor	1

Year.	Locality.	Specimens.
1897	Wyoming	13
1898	Wyoming	9
1899	Transylvania	6
1900	Canada and Newfoundland	4
1901	Newfoundland	4
1902	Sardinia	5
1902–1903	Kenya Colony	55
1904	Yukon Territory	2
1905	Newfoundland	3
1906	Yukon Territory	9
1907	Asia Minor and Norway	5
1909	Kenya Colony	61
1911	Bahr el-Ghazal, Sudan	15
1911–1912	Kenya Colony	73
1915–1916 (on active service)	Kenya Colony and Tanganyika Territory	11

The Catalogue is divided into two parts, the first of which deals with the African Big Game Collection, containing 443 specimens, and the second (p. 89) with 81 specimens from Europe, Asia, and North America.

Unless the contrary is stated, the specimens referred to are all mounted heads of adult male individuals. All horn measurements are given in inches.

The synonymy of the various species and subspecies given in the Catalogue is not complete, but it is sufficient to indicate the origin of the names used.

J. G. DOLLMAN.

16 *September*, 1921.

PART 1.

AFRICAN SPECIMENS.

Order PRIMATES.

Family CERCOPITHECIDÆ.

Subfamily PITHECINÆ.

WHITE-TAILED GUEREZA.

COLOBUS ABYSSINICUS CAUDATUS.

Colobus guereza caudatus, Thomas, Proc. Zool. Soc. 1885, p. 219, pl. xii.

Distinguished from the Abyssinian Guereza by having the white brush of the tail very much larger, only about 3 to 6 inches of the base of the tail being black; the white hairs of the body-mantle, as a rule, entirely cover the black basal part of the tail.

Typical locality, Useri, north-east slopes of Mt. Kilimanjaro. There can be but little doubt that this monkey is fairly widely distributed throughout Kenya Colony. Several different races of the East African White-tailed Guereza have been described, but the distinguishing characters are perhaps of doubtful systematic value. Owing to the licensing restrictions now in force it is rarely that more than one or two of these monkeys are obtained from the same locality, and in dealing with such small differences of coloration as have been used to distinguish these various forms, a large series of specimens is needed before such differences can be accepted as being of any systematic importance.

1–2 —19.7.15.1–2. Skins, stuffed. Kenya Colony.

Order CARNIVORA.

Family CANIDÆ.

SIDE-STRIPED JACKAL.

CANIS ADUSTUS.

Canis adustus, Sundevall, Öfvers. Akad. Forhandl. Stockholm, vol. iii. p. 121, 1847.

Distinguished from the Black-backed Jackal, *Canis mesomelas*, by its silvery grey coloured coat, white tail-tip, and, usually, by the presence of a well-marked white diagonal stripe on each side of body.

Typical locality, "Caffraria interiore"; range from the Transvaal northwards across the Zambesi into Northern Rhodesia.

3 —19. 7. 15. 3. July, 1895. Umniati River, Mashonaland, Southern Rhodesia.

EAST AFRICAN GREAT-EARED FOX.

OTOCYON VIRGATUS.

Otocyon virgatus, Miller, Smithson. Misc. Collect. vol. xlii. p. 485, 1909.

A small fox-like animal with very large ears; distinguished from the true foxes and dogs by having three or four upper molar teeth and four lower ones on each side of the jaws. This form is distinguished from the South African *O. megalotis* by the underside of the body being buff-coloured instead of creamy white, and having the tail marked above with a distinct black stripe. Miller in his original description states that the skull differs from that of *megalotis* in the flatter, less inflated auditory bullæ, and the absence of a notch between the angular and subangular processes of the mandible.

Typical locality, Naivasha Station, Kenya Colony; range from Tanganyika Territory northwards through Kenya Colony towards Abyssinia. The Abyssinia Great-eared Fox was recently described by Cabrera * as a distinct form under the name *canescens*; both

* Ann. Mag. Nat. Hist. ser. 8, vol. vi. p. 462, 1910.

virgatus and *canescens* are probably only geographical races of the South African *megalotis*.

4 —19. 7. 15. 6 (sex not recorded). Skin, mounted, 1912. Northern Guaso Nyiro, Kenya Colony.

SOUTH AFRICAN HUNTING DOG.

LYCAON PICTUS PICTUS.

Hyæna picta, Temminck, Ann. Gén. Sci. Phys. vol. iii. p. 54, pl. xxxv., 1820.

Lycaon tricolor, Gray, Griffith's Animal Kingdom, vol. v. p. 151, 1827.

Lycaon pictus, Garrod, Proc. Zool. Soc. 1878, p. 373.

The presence of four toes on the fore feet distinguishes the genus *Lycaon* from *Canis*. Ears very large. General colour a mixture of yellowish buff, blackish brown, and white, in irregular blotches, the pattern being extremely variable; a dark frontal stripe usually present. Skull heavily built and excessively broad, with very massive teeth, superficially resembling those of the *Hyænidæ*.

Typical locality, Mozambique. The Hunting Dog is very generally distributed over the greater part of South Africa; it still exists in certain parts of Cape Colony. The Cape Colony *Lycaon* has been separated as a distinct race under the name *venaticus* *, and another form has been described from Zululand as *zuluensis* †.

5 —19. 7. 15. 7. 21 October, 1884. Nata River, Western Matabililand, Southern Rhodesia.

Family **HYÆNIDÆ.**

DESERT STRIPED HYÆNA.

HYÆNA HYÆNA BERGERI.

Hyæna (*Hyæna*) *hienomelas bergeri*, Matschie, Sitzber. Ges. nat. Freunde, 1910, p. 361.

Hyæna hyæna bergeri, Roosevelt and Heller, Life-histories of African Game Animals, vol. i. p. 255, 1915.

* Burchell, Travels in S. Africa, vol. i. p. 456, 1822.

† Thomas, Ann. Mag. Nat. Hist. ser. 7, vol. xiv. p. 98, 1904.

Distinguished from its near ally *Hyæna hyæna schillingsi* by its smaller size, more indistinct and lighter stripes, and the yellowish buff colour of the feet.

Typical locality, Elgeyo Escarpment, Uasin Gishu Plateau, Kenya Colony; range appears to extend northwards from the Uasin Gishu Plateau and Northern Guaso Nyiro towards Lake Rudolf and Southern Abyssinia. A name has been given to the Striped Hyæna from the Northern Guaso Nyiro by Lönnberg *, but according to Roosevelt and Heller †, who had the opportunity of examining a large series of specimens from this locality, there is no difference of systematic value between the Northern Guaso Nyiro specimens and *bergeri*.

6 —19. 7. 15. 8 (sex not recorded). 1912. Northern Guaso Nyiro, Kenya Colony.

SOUTH AFRICAN SPOTTED HYÆNA.

Crocuta crocuta capensis.

Hyæna capensis, Desmarest, Mamm. vol. i. p. 216, 1820.
Crocuta capensis, Trouessart, Cat. Mamm. Suppl. p. 243, 1905.

Members of this genus are easily distinguished from the Striped Hyænas by the absence of the dorsal mane, smaller ears, and the spotted markings on the body; the skull is shorter and wider, and the lower carnassial tooth is without the heel.

Type locality, Cape Colony. In Cape Colony this hyæna is now nearly extinct; in Zululand and parts of the Transvaal it is still found, and further north it is fairly plentiful. In 1900 Matschie ‡ described a Spotted Hyæna from the Orange River Colony under the name *Hyæna* (*Crocotta*) *gariepensis*; the following specimens may belong to this race, but there is not sufficient material at present available for examination to justify the recognition of this form.

7 —19. 7. 15. 9. 20 July, 1880. Umfuli River, Mashonaland, Southern Rhodesia.

8 —19. 7. 15. 10 (female). October, 1892. Near Pungwe River, Mozambique.

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* *Hyæna schillingsi rendilis*, Lönnberg, Ann. Mag. Nat. Hist. ser. 8, vol. ix. p. 64, 1912

† Life-histories of African Game Animals, vol. i. p. 256, 1915.

‡ Sitzber. Ges. nat. Freunde, 1900, p. 26.

EASTERN SPOTTED HYÆNA.

Crocuta crocuta germinans.

Hyæna (*Crocotta*) *germinans*, Matschie, Sitzber. Ges. nat. Freunde, 1900, p. 26.

Hyæna crocuta germinans, Roosevelt, African Game Trails, Amer. ed., p. 473 ; London ed., p. 485, 1910.

Crocuta crocuta germinans, Roosevelt and Heller, Life-histories of African Game Animals, vol. i. p. 261, 1915.

Distinguished from the South African race by its smaller size and rather narrower skull. The colour of the body is extremely variable and the dark spots are very large.

Typical locality, Lake Rukwa, Tanganyika Territory. This hyæna would appear to be very widely distributed in East Africa, being found throughout the greater part of Kenya Colony and Tanganyika Territory. North of the Northern Guaso Nyiro and through the Lake Rudolf region towards Abyssinia its place is taken by *Crocuta crocuta fisi*, described by Heller * from the area between the Northern Guaso Nyiro and Mount Marsabit. The names *kibonotensis*, *panganensis*, and *nzoyæ* must be regarded as synonyms of *germinans*.

♀ —19. 7. 15. 11 (female). 13 December, 1902. Nairobi, Kenya Colony.

Family FELIDÆ.

LION.

Felis leo.

Felis leo, Linn. Syst. Nat. ed. 10, vol. i. p. 41, 1758 ; ed. 12, vol. i. p. 60, 1766.

In "A Hunter's Wanderings in Africa" † Selous gives the following account of the variations met with in the South African Lion:—"All over the interior of South Africa, wherever game still exists in sufficient quantities to furnish them with food, lions are

* Smithson. Misc. Collect. vol. lxi. no. 22, p. 5, 1914.

† p. 257, 1881.

to be met with, and are equally plentiful on the high, open downs of the Mashuna country, amongst the rough broken hills, through which run many of the tributaries of the Zambesi, in the dense thorn-thickets to the west of the Gwai River, or in the marshy country in the neighbourhood of Linyanti. As, however, they are nocturnal in their habits, and usually lie asleep during the daytime, in beds of reeds, or in the midst of dense thickets, it is only by chance that one comes across them, even in parts of the country where, from hearing their voices at nights, and constantly seeing their spoor, there can be no doubt that they are plentiful. All the Dutch hunters in the interior, as well as many Europeans, who pretend to higher scientific attainments, say that there are at least three distinct species of lions in South Africa; whilst some assert that there are four or even five. Their distinctions are all based upon the length and colour of the mane, the general colour of the coat, the spots on the feet, and the comparative size of the animals. For my part, and judging from my own very limited experience of lions, I cannot see that there is any reason for supposing that more than one species exists, and as out of fifty male lion skins scarcely two will be found exactly alike in the colour and length of the mane, I think it would be as reasonable to suppose that there are twenty species as three. The fact is, that between the animal with hardly a vestige of a mane, and the far handsomer but much less common beast with a long flowing black mane, every possible intermediate variety may be found. This I say emphatically, after having seen a great many skins, and I entirely deny that three well-marked and constant varieties exist. On June 6, 1879, I came across two fine old male lions on the Mābābe flat, lying together under the same bush, and shot them both. One was a full-maned lion with a very dark-coloured skin, the other a very light-coloured animal with scarcely any mane at all. In size they were nearly as possible equal, the skins, when pegged out, measuring 10 feet 10 inches and 10 feet 9 inches respectively. A few months afterwards Mr. H. C. Collison and myself again came across two lions, the one dark-coloured, with a full, blackish mane, the other a yellow-looking animal with but little mane. A day or two later we shot two lionesses. The one killed by my friend carried in her womb three cubs (two males and a female) that would probably have seen the light a few hours later. Of the two

male cubs the one, owing to the dark colour of the tips of the hairs, was almost black, whilst the other was reddish yellow. The skin of the female cub was also of a light colour . . . . . "

The Lion has been completely exterminated in the country south of the Orange River; it still occurs in parts of the Transvaal and Zululand, and in Rhodesia and Bechuanaland is found in considerable numbers.

10 —19.7.15.14. Skin. 10 November, 1883. Umzweswi River, Mashonaland, Southern Rhodesia.

11 —19.7.15.15. Skin. 6 October, 1884. North Kalahari, near Metsi butluku.

12 —19.7.15.16. Skin. October, 1892. Between Pungwe River and Lake Sungwe, Mozambique.

13 —19.7.15.17. Skin. 16 July, 1880. Near junction of Gwibi and Hanyani Rivers, Mashonaland, Southern Rhodesia.

14 —19.7.15.18 (female). Skin. 16 July, 1880. Near junction of Gwibi and Hanyani Rivers, Southern Rhodesia.

15 —19.7.15.19 (female). 16 July, 1880. Near junction of Gwibi and Hanyani Rivers, Southern Rhodesia.

16–17 —19.7.15.20–21. Skins. 6 June, 1879. Mababi Plain, Khama's Country, Bechuanaland.

18–19 —19.7.15.22–23 (females). Skins. 4 June, 1879. Mababi Plain, Khama's Country, Bechuanaland.

20 —19.7.15.24 (female). Skin. 20 October, 1879. Mababi Plain, Khama's Country, Bechuanaland.

21 —19.7.15.25. Skin. 5 May, 1879. Botletlie River, Khama's Country, Bechuanaland.

22 —19.7.15.26. Skin. 22 June, 1882. Bili River, Mashonaland, Southern Rhodesia.

23 —19.7.15.27 (female). Skin. 14 September, 1879. Linyanti, north bank of Chobe River.

24 —19.7.15.28 (female). Skin. 8 June, 1883. Umgezi River, Mashonaland, Southern Rhodesia.

25 —19.7.15.29 (female). Skin. December, 1874. Upper Tati River, Tati District, Southern Rhodesia.

26 —19.7.15.30. Skin. 1886. Umzingwani River, 20 miles south of Bulawayo, Southern Rhodesia.

27 —19.7.15.31 (female). Skin. 7 July, 1880. Near Umfuli River, Mashonaland, Southern Rhodesia.

28 —19.7.15.32. Skin, mounted. December, 1891. Hartley Hills, Umfuli River, Mashonaland, Southern Rhodesia.

LEOPARD.

Felis pardus.

Felis pardus, Linn. Syst. Nat. ed. 10, vol. i. p. 41, 1758; ed. 12, vol. i. p. 61, 1766.

The Leopard is still found in South Africa, in the country south of the Orange River, but is gradually being exterminated. In Southern Rhodesia the species is by no means rare.

29 —19. 7. 15. 33 (female). Skin, mounted. July, 1895. Near the Sebakwi River, Eastern Matabililand, Southern Rhodesia.

EAST AFRICAN SERVAL.

Felis capensis hindei.

Felis capensis hindei, Wroughton, Ann. Mag. Nat. Hist. ser. 8, vol. v. p. 205, 1910.

Closely allied to the typical race; dark markings broad, the median dorsal lines usually broken into quite short lengths. General colour of body rich buff, much as in the South African form.

Typical locality, Machakos, Ulu District, Kenya Colony. This Serval appears to be widely distributed throughout East Africa, specimens having been recorded from as far north as Lado, and southwards through Kenya Colony into Tanganyika Territory.

30 —19. 7. 15. 34 (sex not recorded). Skin, mounted. Sungari Rongai River, Kenya Province, Kenya Colony.

SOUTH AFRICAN CHEETAH.

Acinonyx jubatus jubatus.

Felis jubata, Erxleben, Syst. Reg. Anim. p. 510, 1777.

Acinonyx jubatus, Elliot, Cat. Mamm. Field Mus. (Field Mus. Zool. Pub. No. 115, vol. viii.) p. 396, 1907.

The South African Cheetah is rather smaller than the East African races, with the general ground-colour rather darker and spots smaller; in appearance it more nearly resembles the Indian Cheetah, *Acinonyx venaticus*.

In South Africa the Cheetah is still plentiful in Southern Rhodesia and parts of the Kalahari.

31 —19. 7. 15. 37. September, 1885. Umfuli River, Mashonaland, Southern Rhodesia.

Order UNGULATA.

Family BOVIDÆ.

Subfamily BOVINÆ.

SOUTH AFRICAN BUFFALO.

SYNCERUS CAFFER CAFFER.

Bos caffer, Sparrman, K. Svenska Vet.-Ak. Handl. vol. xl. p. 79, 1779.
Bos (Bubalus) caffer, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 384, v. p. 371, 1827.
Bos caffer typicus, Lydekker, Wild Oxen, Sheep, and Goats, p. 97, 1898.
Syncerus caffer caffer, Hollister, Proc. Biol. Soc. Washington, vol. xxiv. p. 192, 1911.

Size large; horns bent sharply backwards a short distance from base. General colour blackish, occasionally reddish brown.

Of the three bulls in the Collection, No. 19.7.15.39 has the largest horns:—greatest width outside $44\frac{1}{2}$; inside width 39; depth of palm over curve $13\frac{1}{2}$; spread from tip to tip 29. The horns of the cow, which is a brownish red-coloured specimen, are considerably more slender:—greatest width outside 39; inside width $35\frac{1}{4}$; depth of palm 7; spread from tip to tip $26\frac{1}{2}$.

Typical locality, Sunday River, near Algoa Bay, South Africa, the range extending into Northern Natal and Rhodesia. Two other forms of South African Buffalo have been described*, *gariepensis* from the Orange River Colony, and *limpopoënsis* from Swaziland; the horn characters that have been used to distinguish these so-called species are, however, so very unsatisfactory that it seems best to ignore these two names, and consider the following specimens as representing the typical race, which may be called the South African Buffalo.

* Matschie, Sitzber. Ges. nat. Freunde, 1906, pp. 166 & 167.

32 —19. 7. 15. 39. October, 1877. South bank of Chobe River, west of Sunta Outlet.

33 —19. 7. 15. 40 (female). October, 1877. South bank of Chobe River, opposite Linyanti.

34 —19. 7. 15. 41. November, 1876. Ramokwebani River, Western Matabililand, Southern Rhodesia.

35 —19. 7. 15. 42. September, 1887. Near Angwa River, Mashonaland, Southern Rhodesia.

EAST AFRICAN BUFFALO.

Syncerus caffer radcliffei.

Bubalus caffer radcliffei, Thomas, Proc. Zool. Soc. 1904, vol. i. p. 371.
Bos caffer radcliffei, Lydekker, Game Animals of Africa, p. 70, 1908.
Syncerus caffer radcliffei, Holliister, Proc. Biol. Soc. Washington, vol. xxiv. p. 192, 1911.

Similar to the South African race in size and colour, but differing in the palm of the horn base being smooth, not roughened by transverse ridges as in *Syncerus caffer caffer*. The horns are also said to average a little longer.

Two fine heads of this Buffalo were obtained by Selous during his hunting trip to the Northern Guaso Nyiro in 1912; the best head (No. 19. 7. 15. 43) measures as follows:—greatest width outside 40; greatest width inside 35; width across palm on face of horn 12; spread from tip to tip 26½.

Typical locality, Ankoli, South-West Uganda; range from Northern Uganda southwards to Tanganyika Territory, extending as far east as the northern Guaso Nyiro Valley and along the Tana River to the coast, and as far west as Mt. Ruwenzori and Lake Kivu.

36–37 —19. 7. 15. 43-44. 1912. Northern Guaso Nyiro, Kenya Colony.

Subfamily **ALCELAPHINÆ.**

COKE HARTEBEEST.

Alcelaphus cokei cokei.

Alcelaphus cokei, Günther, Ann. Mag. Nat. Hist. ser. 5, vol. xiv. p. 426, 1884.
Bubalis cokei cokei, Lydekker & Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 15, 1914.

Size medium, shoulder-height about 48 inches. Horns wide-spread and bracket-shaped, good horns measuring from 17 to 21 inches on front curve. Head comparatively short, much shorter than in the Lelwel Hartebeests. General colour reddish or brownish buff.

The specimen from Voi (No. 19. 7. 15. 75) possesses the best horns:—length on front curve 17; circumference 10; spread from tip to tip $15\frac{1}{2}$.

Typical locality, Usagara, Tanganyika Territory; range includes the southern part of Kenya Colony south-west of the Tana River and extends southwards into Tanganyika Territory. The Coke Hartebeest found in the highlands of Kenya Colony from the eastern slopes of Mt. Kenya and Lake Naivasha southwards to the Victoria Nyanza and north-west part of Tanganyika Territory has been described by Heller * as a distinct race, under the name *kongoni*. From the material at present available for examination the distinctive characters attributed to this form do not seem to justify such a separation, and thus the specimens shot by Selous at Simba and in the Naivasha Province are here referred to the typical form.

38–39 —19. 7. 15. 71–72. January, 1903. Simba, Ulu District, Kenya Colony.

40–41 —19. 7. 15. 73–74 (females). 16 January, 1903. Simba, Ulu District, Kenya Colony.

42 —19. 7. 15. 75. 28 January, 1903. Voi, Taita and Taveta District, Kenya Colony.

43 —19. 7. 15. 76. Naivasha Province, Kenya Colony.

NAKURU HARTEBEEST.

Alcelaphus cokei nakuræ.

Bubalis nakuræ, Heller, Smithson. Misc. Collect. vol. lx. no. 8, p. 6, 1912.
Bubalis cokei nakuræ, Lydekker & Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 16, 1914.

Similar in size to the typical race; distinguished by the horns being less widely spread, more as in the Neumann Hartebeest, to which form Selous referred his specimens in the "Catalogue of Trophies. Specimens of Natural History," Worplesdon, 1903.

The best head in the following series is No. 19. 7. 15. 64,

* Smithson. Misc. Collect. vol. lx. no. 8, p. 5, 1912.

which has the following horn measurements:—length on front curve 20; circumference $11\frac{1}{4}$; spread from tip to tip $11\frac{1}{4}$.

Typical locality, near Lake Nakuru, Naivasha District, Kenya Colony. So far as is at present known this race has a very limited range, from Elmenteita to Lake Baringo.

44–45 —19. 7. 15. 64–65. 20 December, 1902. South end of Lake Nakuru, Naivasha District, Kenya Colony.

46–47 —19. 7. 15. 66–67. 1 February, 1903. South end of Lake Nakuru, Naivasha District, Kenya Colony.

48 —19. 7. 15. 68. 2 February, 1903. South end of Lake Nakuru, Naivasha District, Kenya Colony.

49–50 —19. 7. 15. 69–70 (females). 1 February, 1903. South end of Lake Nakuru, Naivasha District, Kenya Colony.

JACKSON LELWEL HARTEBEEST.

ALCELAPHUS LELWEL JACKSONI.

Bubalis jacksoni, Thomas, Ann. Mag. Nat. Hist. ser. 6, vol. ix. p. 386, 1892; Proc. Zool. Soc. 1904, vol. i. p. 455.

Bubalis lelwel jacksoni, Lydekker, Game Animals of Africa, p. 107, 1908.

Size rather larger than in *cokei*, height at shoulder about 52 inches. Distinguished by the greater elongation of the head and extreme development of the horn-pedicle. The Jackson Hartebeest is distinguished from the typical *lelwel* by the absence of dark markings on the legs and face. General body colour yellowish rufous. Good horns from 24 to 26 inches in length on front curve.

Of the five males in the Collection No. 19. 7. 15. 77 has the best horns:—length on front curve 24; circumference $11\frac{3}{4}$; spread from tip to tip $10\frac{3}{4}$.

Type locality, Kavirondo; range appears to extend eastwards into Kenya Colony as far as the Ravine Station. Heller* has recently described the Kenya Lelwel Hartebeest as distinct from *jacksoni*, under the name *keniæ*, on account of its wider spread horns, shorter horn-pedicle, and rather paler colour.

51–52 —19. 7. 15. 77–78. Uasin Gishu Plateau, Kenya Colony.

53 —19. 7. 15. 79 (female). Uasin Gishu Plateau, Kenya Colony.

54–56 —19. 7. 15. 80–82. Uasin Gishu Plateau, Kenya Colony.

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* Smithson. Misc. Collect. vol. lxi. no. 17, p. 3, 1913.

SELBORNE ROOI HARTEBEEST.

Alcelaphus caama selbornei.

Bubalis caama selbornei, Lydekker, Proc. Zool. Soc. 1913, p. 820, fig. 135, Abstract No. 119, p. 19.

Closely related to the extinct Cape Rooi Hartebeest, the typical race, which appears to have been confined to the area south of the Orange River. The present race was founded on a specimen from Kimberley, imported from the Transvaal; it is said to differ from *caama* in being paler in colour, and in having the dark face blaze mixed with tawny and not extending to the horns and muzzle. The light marking between the eyes is also more extensive, and the dark markings on the limbs are less developed and less intense. Distinguished from the Lelwel Hartebeest by the dark face blaze, light marking between eyes, dark markings on limbs, and light coloured rump. The horns, mounted on a high pedicle, curve forwards above the V and then turn sharply backwards, almost at right angles; they are about equal in length to those of *jacksoni*, good horns from 24 to 26 inches in length along the front curve.

Best horn measurements (No. 19. 7. 15. 84):—length on front curve $23\frac{1}{4}$; circumference 12; spread from tip to tip $10\frac{1}{2}$.

This race extends northwards from the Orange River into Southern Rhodesia and Bechuanaland.

Selous * gives the following account of the distribution of the Rooi Hartebeest:—"The range of this Antelope is very similar to that of the Gemsbuck. It is still found in Griqualand West, in some parts being fairly plentiful. All along the eastern border of the Kalahari Desert it is also to be found, and extends as far east as the river Serule on the road from Bamangwato to Tati. In the neighbourhood of the saltpans lying between the Botletlie River and the road from Bamangwato to the Zambesi, it is very plentiful, and may be met with in large herds. It does not, however, extend its range to the north of these saltpans, and is unknown in all the country between the Chobe and Mābābe rivers, as it is also in the Matabele and Mashuna countries. . . . ."

* Proc. Zool. Soc. 1881, p. 763.

57 —19. 7. 15. 83. 4 December, 1876. Near Goqui River, Khama's Country, Bechuanaland.

58–59 —19. 7. 15. 84–85. April, 1888. Near Meesa, Khama's Country, Bechuanaland.

60 —19. 7. 15. 86 (female). 13 February, 1879. Batlanarma, east border of Kalahari.

LICHTENSTEIN HARTEBEEST.

Alcelaphus lichtensteini.

Antilope lichtensteini, Peters, Mitth. Ges. nat. Freunde, 18 Dec. 1849; Reise nach Mossambique, Säugeth. vol. i. p. 190, pls. xliii., xliv., 1852.
Alcelaphus lichtensteini, Gerrard, Cat. Bones Mamm. Brit. Mus. p. 243, 1862.

Size much as in the Lelwel Hartebeests, height at shoulder about 48 inches. Face shorter, the frontal region not markedly elongated. Horns mounted on a short and very broad pedicle, stouter and shorter than in the foregoing forms; good horns measure from 20 to 23 inches in length along the front curve. General colour brownish buff, rather redder on the back; chin, front of lower part of legs, and tail-tuft black. Rump nearly as pale in colour as in *caama*.

Of the four males in the Collection No. 19. 7. 15. 87 possesses the finest horns, measuring as follows:—length on front curve 19; circumference $12\frac{1}{2}$; spread from tip to tip $4\frac{1}{4}$. The females carry very much smaller horns, the largest in the following series being No. 19. 7. 15. 91:—length on front curve $14\frac{1}{2}$; circumference $8\frac{1}{4}$; spread from tip to tip 4.

Type locality, Tette, Mozambique; range includes Mozambique, Southern and Northern Rhodesia, Nyasaland, and parts of Tanganyika Territory.

Selous * gives the following account of the distribution of this species:—"This fine antelope, whose range is now known to extend over large areas of country to the north of the Zambesi in Central and East Central Africa, as well as over a considerable part of South-East Africa to the south of that river, was first discovered by the German naturalist, Dr. Peters, in the neighbourhood of Sena on the lower Zambesi, and by him named after his compatriot, the traveller Dr. Lichtenstein. South of the point where

* Great and Small Game of Africa, p. 160, 1899.

Dr. Peters first met with it, this hartebeest is found throughout the greater part of the low-lying coast-country between the Zambesi and the Sabi, and although its range has not been accurately determined in this direction, it probably extends into certain districts of the country to the south of the lower course of the latter river. This species is fairly common on both sides of the central and upper course of the Sabi River, as far north as a point some 50 miles south of Mount Wedza, and from there eastwards may be met with to within a few miles of Massikessi. Westwards from the central Sabi a few stragglers range as far as and even beyond the Lunti River, while in 1885 a small herd of six suddenly appeared in northern Mashonaland, near the Hanyani River, some 20 miles to the north-west of where Salisbury now stands. . . . . Throughout the greater part of the country in which I have travelled to the north of the Zambesi, I have met with Lichtenstein's Hartebeest; and it is one of the commonest antelopes on the Table-lands lying between the Zambesi and the Kafukwi, as well as all over the country to the north of the latter river, which is where I first met with it in 1877–78 . . . ."

61 —19. 7. 15. 87. October, 1892. Between the Pungwe River and Lake Sungwe, Mozambique.

62 —19. 7. 15. 88 (female). October, 1892. Between the Pungwe River and Lake Sungwe, Mozambique.

63 —19. 7. 15. 89. August, 1891. Pungwe River, Mozambique.

64–65 —19. 7. 15. 90–91 (male and female). October, 1892. Pungwe River, Mozambique.

66 —19. 7. 15. 92. 22 December, 1877. Near Sitanda, Lukanga River, North-East Rhodesia.

BONTEBOK.

Damaliscus pygargus.

Antilope dorcas, Pallas, Misc. Zool. p. 6, 1766, nec *Capra dorcas*, Linn.

Antilope pygarga, Pallas, Spicil. Zool. fasc. i. p. 10, 1767; fasc. xii. p. 15, 1777.

Damalis pygarga, Gray, Ann. Mag. Nat. Hist. ser. 1, vol. xviii. p. 233, 1846; List Osteol. Brit. Mus. p. 59, 1847; Proc. Zool. Soc. 1850, p. 141; Knowsley Menagerie, p. 21, 1850; Cat. Ungulata Brit. Mus. p. 127, 1852; Cat. Ruminants Brit. Mus. p. 45, 1872; Hand-List Ruminants Brit. Mus. p. 116, 1873.

Damaliscus pygargus, Sclater and Thomas, Book of Antelopes, vol. i. p. 73, pl. viii., 1895.

The members of this genus are distinguished from the Hartebeests by their shorter faces and absence of horn-pedicles, the frontals not being specially developed for this purpose as in *Alcelaphus*. In *pygargus* the height at the shoulder is about 40 inches. Horns sublyrate, fine horns measure from 15 to $16\frac{3}{4}$ inches in length. General colour rufous brown, dark purplish brown on flanks and upper parts of limbs, paler on shoulders and saddle. Conspicuous white blaze on forehead, continued forwards as a broad nose-stripe. Ears brownish buff. Base of tail and patch on rump white. Lower parts of limbs white on outer sides. Belly white, sharply marked off from brown flanks.

Best horn measurements (No. 19. 7. 15. 93):—length on front curve 15; circumference $6\frac{3}{4}$; spread from tip to tip $8\frac{1}{2}$. The best of the two females is No. 19. 7. 15. 97, which has the following horn measurements:—length on front curve $14\frac{3}{4}$; circumference $5\frac{1}{4}$; spread from tip to tip $6\frac{5}{8}$.

Typical locality, Cape Colony; the range formerly extended as far north as the Orange River. At the present time the species is extinct in the wild state. Selous secured his specimens from one of the two farms where the Bontebok is preserved.

67-68 —19. 7. 15. 93–94. April, 1895. Nachtwacht Farm, near Cape Agulhas, Cape Colony.

69 —19. 7. 15. 95 (immature). November, 1896. Nachtwacht Farm, near Cape Agulhas, Cape Colony.

70–71 —19. 7. 15. 96–97 (females). Skull and horns. Nachtwacht Farm, near Cape Agulhas, Cape Colony.

BLESBOK.

Damaliscus albifrons.

Antilope albifrons, Burchell, Travels in S. Africa, vol. ii. p. 335, 1824.

Damalis albifrons, Gray, Ann. Mag. Nat. Hist. ser. 1, vol. xviii. p. 233, 1846; Proc. Zool. Soc. 1850, p. 141; Knowsley Menagerie, p. 22, pl. xxii. fig. 1, 1850; Cat. Ungulata Brit. Mus. p. 129, 1852; Cat. Ruminants Brit. Mus. p. 45, 1872; Hand-List Ruminants Brit. Mus. p. 116, 1873.

Damaliscus albifrons, Sclater and Thomas, Book of Antelopes, vol. i. p. 79, pl. ix., 1895.

Very similar to the Bontebok, distinguished by the absence of the purplish-black body markings, the white forehead blaze being

frequently separated from the white nasal marking by a transverse rufous band, the ears being nearly white, base of tail and rump but very little lighter than back, lower part of limbs being rufous-brown on outer sides, and the under parts of body brownish in front, dirty white behind. Good horns from 16 to 18¼ inches in length.

There are only two specimens of this rare Antelope in the Collection, both being females; the mounted head, No. 19. 7. 15. 98, has the longest horns, which measure as follows:—length on front curve 13⅞; circumference 5; spread from tip to tip 5⅞.

The exact position of the typical locality is not known, but was probably Cape Colony. Formerly the Blesbok was found throughout the northern part of Cape Colony, and its range extended as far north as Bechuanaland. Like the preceding species, the Blesbok can no longer be regarded as existing in the wild state; it is preserved on a number of farms in the Transvaal, Orange River Colony, and Cape Colony.

72 —19. 7. 15. 98 (female). 28 February, 1879. Western Transvaal.

73 —19. 7. 15. 99 (female). Skull and horns. May, 1895. Dreifontein, Orange River Colony.

SASSABY, or TSESEBE.

Damaliscus lunatus.

Antilope lunata, Burchell, Travels in S. Africa, vol. ii. p. 334, 1824; List Quadr. presented to Brit. Mus. p. 5, 1825.

Damalis lunata, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 352, vol. v. p. 364, 1827.

Damaliscus lunatus, Sclater and Thomas, Book of Antelopes, vol. i. p. 85, pl. x., 1895.

Size larger than in *albifrons* and *pygargus*; shoulder-height about 48 inches. General colour chocolate-rufous, dark purplish-brown on face, shoulders, haunches, and upper parts of legs; shanks brownish buff. Belly dark brown in front, whitish behind; no line of demarcation between flanks and belly. Horns very different from those of the Blesbok and Bontebok, being widely divergent in the basal part. Good horns measure from 16 to 17½ inches in length, 7¼ to 8½ inches in circumference, and spread from tip to tip from 11¼ to 13¾.

Best horn measurements (No. 19.7.15.101):—length on front curve $15\frac{1}{2}$; circumference $8\frac{1}{2}$; spread from tip to tip $12\frac{1}{2}$. The female specimen (No. 19.7.15.103) has horns of the following size:—length on front curve 14; circumference 6; spread from tip to tip 10.

Typical locality, Cape Colony; the range of distribution is very considerable, extending as far north as the south end of Lake Tanganyika.

74 —19.7.15.100. August, 1892. Near Hanyani River, Mashonaland, Southern Rhodesia.

75 —19.7.15.101. 13 October, 1877. Near Daka, Wankie, 60 miles south of Victoria Falls.

76 —19.7.15.102. July, 1882. Mashonaland, Southern Rhodesia.

77 —19.7.15.103 (female). 22 September, 1880. Mashonaland, Southern Rhodesia.

TIANG.

DAMALISCUS KORRIGUM TIANG.

Bubalus lunatus, Sundevall, K. Svenska Vet.-Ak. Handl. 1842, pp. 201 and 243, nec *Antilope lunata*, Burchell.

Damalis tiang, Heuglin, Nova Acta Ac. Cæs. Leop.-Car. vol. xxx. pt. 2, p. 22, pl. i., 1863.

Damaliscus tiang, Sclater and Thomas, Book of Antelopes, vol. i. p. 63, 1895.

Damaliscus corrigum tiang, Lydekker, Great and Small Game of Africa, p. 166, 1899; Game Animals of Africa, p. 117, 1908.

Damaliscus korrigum tiang, Pocock, Proc. Zool. Soc. 1910, p. 902.

Size as in the preceding species, height at shoulder from 48 to 52 inches. Horns larger, thicker, more strongly ridged and not nearly so widely spread at base, the divergence taking place very gradually; good horns measure from 19 to $22\frac{1}{4}$ inches along curve. General body-colour cinnamon, rather paler than in the following race; nose with well-marked blackish blaze. Lower parts of limbs bright tan-coloured, insides darker than in typical form.

The only specimen of the Tiang in the Collection was obtained during the expedition Selous made to the Bahr-el-Ghazal after the Derby Eland in 1911; the horn measurements are as follows:—length on front curve $20\frac{1}{2}$; circumference $9\frac{1}{4}$; spread from tip to tip $8\frac{1}{2}$.

Typical locality Sobat Valley, Sudan; range from the Albert Nyanza in the south to east of Lake Rudolf, and northwards through the Bahr-el-Ghazal across the Sobat River to the Blue Nile.

78 —19. 7. 15. 524. 1911. Bahr-el-Ghazal Province, Sudan.

JIMELA.

Damaliscus korrigum jimela.

Damaliscus senegalensis, Sclater, Proc. Zool. Soc. 1886, p. 176; 1890, p. 354.

Damalis jimela, Matschie, Sitzber. Ges. nat. Freunde, 1892, p. 135.

Damaliscus jimela, Sclater and Thomas, Book of Antelopes, vol. i. p. 67, 1895.

Damaliscus corrigum jimela, Lydekker, Great and Small Game of Africa, p. 166, 1899; Game Animals of Africa, p. 118, 1908.

Damaliscus korrigum jimela, Pocock, Proc. Zool. Soc. 1910, p. 903.

Similar in size to the Tiang; differs in being darker in colour and having rather smaller horns. The glossy sheen on the coat is a very conspicuous feature in this race.

Best horn measurements (No. 19. 7. 15. 104):—length on front curve $17\frac{3}{4}$; circumference $8\frac{1}{4}$; spread from tip to tip $8\frac{3}{4}$.

Typical locality, Juba Valley, East Africa; range from Northern Uganda southwards across the Uasin Gishu Plateau to the southern shores of the Victoria Nyanza. It has also been found along the Tana and Sabaki rivers.

79 —19. 7. 15. 104. 29 December, 1902. Near Londiani, Ravine District, Kenya Colony.

80–81 —19. 7. 15. 105–106. January, 1902. Near Londiani, Ravine District, Kenya Colony.

82–83 —19. 7. 15. 107–108. Uasin Gishu Plateau, Uasin Gishu District, Kenya Colony.

Damaliscus korrigum selousi, described by Lydekker * from a head presented to the Museum in 1907 by Selous, shot at the same localities as Nos. 19. 7. 15. 104–106, appears to have been founded on one of the many colour variations to which this race is subject.

* *Damaliscus corrigum selousi*, Lydekker, Field, vol. cx. p. 250, 1907; Game Animals of Africa, p. 117, 1908.

GNU, or WILDEBEEST.

Connochætes gnu.

Bos gnou, Zimmermann, Spec. Zool. Geogr. p. 372, 1772; misspelt.
Antilope gnu, Gmelin, Linn.'s Syst. Nat. vol. i. p. 189, 1788.
Connochætes gnu, Gray, Cat. Ungulata Brit. Mus. p. 119, 1852; Ann. Mag. Nat. Hist. ser. 4, vol. iv. p. 291, 1869; Cat. Ruminants Brit. Mus. p. 43, 1872; Hand-List Ruminants Brit. Mus. p. 113, 1873.

In the members of this genus the horns are not united in a common pedicle, being more as in the Buffalo with an expanded basal region. A well-developed mane is present on the neck. The South African Gnu is distinguished from the other members of the genus by its white tail, short snout, large orbits, and the shape of the horns, which in the adult curve forward and downward and then upward and backward. There is no marked shoulder hump, but the hind quarters are very prominent. Height at shoulder about 46 inches. Dorsal vertebræ fourteen in number. Good horns measure from 23 to 26¾ inches on the front curve.

Best horn measurement (No. 19. 7. 15. 111):—length over curve 26¾; width of palm in straight line 7½; spread from tip to tip 14½.

Type locality, Cape Colony; formerly this species was widely distributed over Africa south of the Limpopo, but is now practically exterminated in the wild state.

84–85 —19. 7. 15. 109–110. May, 1895. Mahemfontein, Orange River Colony.
86 —19. 7. 15. 111. Skull and horns. Caledon, Cape Colony.
87–92 —19. 7. 15. 112–117 (sexes not recorded). Horns. Orange River Colony.

BRINDLED GNU, or BLUE WILDEBEEST.

Connochætes taurinus taurinus.

Antilope taurina, Burchell, Travels in S. Africa, vol. ii. p. 278, 1824; List Quadr. presented to Brit. Mus. p. 7, 1825.
Catoblepas taurinus, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 369, vol. v. p. 368, 1827.
Catoblepas gorgon, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 371, vol. v. p. 369, 1827.
Connochætes gorgon, Gray, Cat. Ungulata Brit. Mus. p. 121, 1852.
Gorgon fasciatus, Gray, Cat. Ruminants Brit. Mus. p. 43, 1872; Hand-List Ruminants Brit. Mus. p. 114, 1873.

Connochætes taurinus, Sclater, List Anim. Zool. Gardens, p. 150, 1883; Proc. Zool. Soc. 1900, p. 771, pl. xlviii.

Connochætes taurinus taurinus, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 56, 1914.

Size larger than in *Connochætes gnu*; shoulder-height from 51 to 52 inches, hind quarters sloping more as in *Alcelaphus*. Horns narrower at base and directed outwards to start with, then curving upwards and inwards. No long fringe between fore legs, such as occurs in *Connochætes gnu*. General colour considerably greyer, with a suggestion of dark stripes on neck and shoulders. Tail-tuft brownish black. Snout long, and dorsal vertebræ thirteen in number. Distinguished from the white-bearded race by the throat fringe being very dark brown in colour.

Best horn measurements (No. 19.7.15.118) :—outside width 30½; inside width 26½; length over curve 27; width of palm in straight line 5; spread from tip to tip 18¼.

Typical locality, Bechuanaland; range extends northwards as far as the Zambesi and N. Rhodesia.

Selous * gives the following account of the distribution of the Blue Wildebeest in South Africa in 1881 :—"This animal is met with on the western borders of Griqualand West and all along the eastern ridge of the Kalahari Desert, and all over South Central Africa wherever I have travelled from the Limpopo to the Zambesi, and from the Mashuna country to Lake Ngami it is to be met with in those districts that are suitable to its habits. Like the Tsessebe it is partial to open downs devoid of bush, or open glades in the forest, and is never met with in hilly countries. On the Mābābe flat it congregates in immense herds during the dry season. In the Manica country, north of the Zambesi, I did not see any Blue Wildebeest; but the natives told me that to the west of the river Kafukwe, in the country of the Mashukulumbwe, they were plentiful . . . . . "

93 —19.7.15.118. April, 1888. North Kalahari, Khama's Country, Bechuanaland.

94 —19.7.15.119. 26 October, 1879. Mababi Plain, Khama's Country, Bechuanaland.

95 —19.7.15.120. 14 November, 1883. Near Umniati River, Mashonaland, Southern Rhodesia.

* Proc. Zool. Soc. 1881, p. 765.

WHITE-BEARDED GNU.

CONNOCHÆTES TAURINUS ALBOJUBATUS.

Connochætes taurinus albojubatus, Thomas, Ann. Mag. Nat. Hist. ser. 6, vol. ix. p. 388, 1892.

Size as in the typical race; distinguished by the throat fringe being yellowish white in colour; general body colour about the same, sometimes rather paler.

Horn measurements (19. 7. 15. 121):—outside width 28; inside width $23\frac{1}{2}$; length over curve $22\frac{1}{2}$; width of palm in straight line $4\frac{3}{4}$; spread from tip to tip 14.

Typical locality, Athi Plains, Kenya Colony; range from Fort Hall and south of Mt. Kenya across the Athi Plains southwards to Kilimanjaro and Tanganyika Territory. A closely allied race, *Connochætes taurinus mearnsi*, has been described by Heller* from the Loita Plains, Kenya Colony. This form is said to be rather smaller in size and darker on the legs; it occupies the area from the Loita Plains southwards into Tanganyika Territory, west of the region inhabited by *albojubatus*. *Connochætes taurinus hecki*, described by Neumann†, is probably only a colour variation of *albojubatus*.

96–97 —19. 7. 15. 121–122. Kenya Colony.

Subfamily CEPHALOPHINÆ.

NATAL DUIKER.

CEPHALOPHUS NATALENSIS NATALENSIS.

Cephalophus natalensis, A. Smith, S. African Quart. Journ. vol. ii. p. 217, 1834; Illustr. Zool. S. Africa, Mamm. pl. xxxii., 1841.

Cephalophus natalensis natalensis, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 69, 1914.

Size medium, shoulder-height about 17 inches. General colour above chestnut red with grey patch on back of neck. Horns short and thick.

* *Gorgon albojubatus mearnsi*, Heller, Smithson. Misc. Collect. vol. lxi no. 17, p. 1.

† *Connochætes hecki*, O. Neumann, Sitzber. Ges. nat. Freunde, 1905, p. 96.

The horns of the male specimen (No. 19. 7. 15. 123) measure as follows :—length $2\frac{5}{16}$, spread from tip to tip $2\frac{11}{16}$.

Typical locality, Natal. The Transvaal Red Duiker has been separated by Wroughton * as a distinct race under the name *C. natalensis amœnus*, and that from Portuguese East Africa has been described by Rothschild † as another distinct form, *C. natalensis robertsi*. The typical race would appear to be confined to Natal.

98 —19. 7. 15. 123. June, 1895. Durban, Natal.
99 —19. 7. 15. 124 (female). June, 1895. Durban, Natal.

RAVINE RED DUIKER.

Cephalophus natalensis ignifer.

Cephalophus ignifer, Thomas, Proc. Zool. Soc. 1903, vol. i. p. 226.
Cephalophus natalensis ignifer, Roosevelt and Heller, Life-histories of African Game Animals, vol. ii. p. 530, 1915.

A larger animal than the Natal Duiker and rather brighter in colour, there not being so much black mixed up with the chestnut-red tint of the dorsal surface. Ears and skull considerably larger.

The only specimen in the Collection has the following horn measurements :—length $2\frac{7}{8}$; spread from tip to tip 2. It was obtained near the typical locality, the type coming from Eldoma Ravine, Ravine District, Kenya Colony. This Duiker is found throughout the high forest areas of Kenya Colony from Mt. Kenya to Mt. Elgon.

100 —19. 7. 15. 125. Ravine District, Kenya Colony.

BLUE DUIKER.

Cephalophus (Guevei) monticola.

Capra monticola, Thunberg, Reise, vol. ii. p. 66, 1789.
Cephalophus cæruleus, A. Smith, S. African Quart. Journ. vol. ii. p. 216, 1834.

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* Ann. Mag. Nat. Hist. ser. 8, vol. viii. p. 277, 1911.
† Proc. Zool. Soc. 1906, p. 691.

Cephalophus monticola, Gray, Ann. Mag, Nat. Hist. ser. 1, vol. xviii. p. 167, 1846.

Guevei monticola, Pocock, Proc. Zool. Soc. 1910, p. 870.

Cephalophus (*Guevei*) *monticola*, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 100, 1914.

A very small species, standing only about 13 inches at the shoulder; horns quite small, rarely exceeding 2 inches in length, the horns of the females but little shorter than those of the males. General colour slaty brown, paler on underparts; legs bright rufous from the knees and hocks to the hoofs.

Of the male specimens No. 19. 7. 15. 128 has the best horns; 2 inches in length with a tip to tip interval of $1\frac{5}{8}$ inches. The best of the females has horns $1\frac{1}{2}$ inches long.

Typical locality, Cape Colony, the range extending over the greater part of South Africa from Angola to Portuguese East Africa, and as far north as Southern Rhodesia.

101–103 —19. 7. 15. 126–128. June, 1895. Durban, Natal.
104–106 —19. 7. 15. 129–131 (females). June, 1895. Durban, Natal.

DUIKER-BOK, OR COMMON DUIKER.

CEPHALOPHUS (SYLVICAPRA) GRIMMI GRIMMI.

Capra grimmia, Linn. Syst. Nat. ed. 10, vol. i. p. 70, 1758.

Antilope (*Cephalophus*) *platous*, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 260, vol. v. p. 344, 1827.

Cephalophus grimmia, Gray, Knowsley Menagerie, p. 8, pls. i. and ii., 1850; Cat. Ungulata Brit. Mus. p. 78, 1852.

Cephalophus grimmi, Thomas, Proc. Zool. Soc. 1892, p. 428; 1893, p. 504.

Sylvicapra grimmi, Pocock, Proc. Zool. Soc. 1910, p. 874.

Cephalophus (*Sylvicapra*) *grimmi*, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 107, 1914.

Cephalophus grimmi grimmi, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 110, 1914.

Size larger than in the foregoing species, shoulder-height 23 to 25 inches. Horns slender and of considerable length, occasionally exceeding 6 inches. General colour pale greyish buff speckled with black; face reddish brown with dark brown marking along nose.

The horns of the following series are not of exceptional size,

the best being those of No. 19. 7. 15. 132:—length $5\frac{1}{2}$; circumference $2\frac{1}{8}$, spread from tip to tip $2\frac{7}{8}$.

Typical locality, South Africa; the range extends nearly up to the Zambesi.

107 —19. 7. 15. 132. July, 1872. Selinya Valley, Kalahari Border, Khama's Country.

108 —19. 7. 15. 133. October, 1896. Delagoa Bay, Lorenço Marques.

109 —19. 7. 15. 134. 21 March, 1885. Umzweswi River, Mashonaland, Southern Rhodesia.

110 —19. 7. 15. 135. 12 December, 1884. Tati River, Tati District, Southern Rhodesia.

ABYSSINIAN DUIKER.

Cephalophus (Sylvicapra) grimmi abyssinicus.

Antilope madoqua, Rüppell, Neue Wirbelth. Abyss., Säugethiere, p. 22, pl. vii. fig. 2, 1835.

Sylvicapra madoqua, Sundevall, K. Svenska Vet.-Ak. Handl. 1844, p. 190, 1846; Fitzinger, Sitzber. K. Ak. Wiss. Wien, vol. lix. pt. 1, p. 168, 1869.

Cephalophus madoqua, Gray, Knowsley Menagerie, p. 9, 1850; Proc. Zool. Soc. 1850, p. 122, 1871, p. 598; Cat. Ungulata Brit. Mus. p. 82, 1852.

Cephalophus abyssinicus, Thomas, Proc. Zool. Soc. 1892, p. 427.

Cephalophus grimmi abyssinicus, Lydekker, Game Animals of Africa, p. 143, 1908.

Sylvicapra abyssinica, O. Neumann, Sitzber. Ges. nat. Freunde, 1905, p. 89.

Rather smaller than the typical race, standing only 18 inches at the shoulder. Dark frontal and nasal marking very conspicuous. Horns shorter.

Of the two specimens of this Duiker in the Collection, No. 19. 7. 15. 136 possesses the best horns:—length $4\frac{1}{4}$, spread from tip to tip $1\frac{5}{16}$.

Typical locality, Abyssinia; the range includes Somaliland, Abyssinia, and the Bahr-el-Ghazal.

111–112 —19. 7. 15. 136–137. Naam River, near Rumbek, Bahr-el-Ghazal.

Subfamily **OREOTRAGINÆ.**

KLIPSPRINGER.

Oreotragus oreotragus oreotragus.

Antilope oreotragus, Zimmermann, Geogr. Geschichte, vol. iii. p. 269, 1783.

Oreotragus typicus, A. Smith, S. African Quart. Journ. vol. ii. p. 212, 1834.

Oreotragus oreotragus, Jentink, Cat. Osteol. Leyden Mus. (Mus. Pays-Bas, vol. ix.) p. 131, 1887; Cat. Mamm. Leyden Mus. (ibid. vol. xi.) p. 160, 1892.

Oreotragus oreotragus oreotragus, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 126, 1914.

Height at shoulder about 20 inches. The harsh pelage, composed of coarse, flattened hairs, immediately distinguishes the Klipspringer from all other African Antelopes. Horns in the form of short spikes. Skull short and very broad, with well-marked lachrymal depressions. Tail reduced to a small stump.

The three heads in the Collection all have horns of about the same size; measurements of No. 19. 7. 15. 138:— length $4\frac{1}{2}$; circumference $2\frac{1}{4}$; spread from tip to tip $3\frac{1}{4}$.

Typical locality, Cape Colony; range extends into Rhodesia as far north as the Zambesi.

113 —19. 7. 15. 138. August, 1889. Mazoe River, Portuguese East Africa.

114 —19. 7. 15. 139. 1885. Mashonaland, Southern Rhodesia.

115 —19. 7. 15. 140. 1887. Western Matabililand, Southern Rhodesia.

Subfamily **NEOTRAGINÆ.**

ORIBI.

Ourebia ourebi.

Antilope ourebi, Zimmermann, Geogr. Geschichte, vol. iii. p. 268, 1783.

Antilope scoparia, Schreber, Säugthiere, pl. cclxi., 1785.

Ourebia scoparia, Sclater and Thomas, Book of Antelopes, vol. ii. p. 15, fig. 23, 1895.

Ourebia ourebi, quoted by Lydekker, Game Animals of Africa, p. 169, footnote, 1908; Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 133, 1914.

The Oribis are readily distinguished from the other members of the subfamily by their larger size and the presence of a bare patch of skin below each ear. The knees are tufted, and small lateral hoofs always present. The Cape Oribi stands about 24 to 26 inches at the shoulder. General colour yellowish rufous with a dark marking on forehead. Horns in good specimens measure from 5 to 7 inches in length; basal portions indistinctly ringed.

The horns of the series in the Collection are of average size only, No. 19. 7. 15. 142 measuring as follows:—length $4\frac{7}{8}$; spread from tip to tip $3\frac{3}{8}$.

Typical locality, Cape Colony; range extends northwards through Southern Rhodesia across the Zambesi into Northern Rhodesia and the Congo.

116 —19. 7. 15. 141. 2 September, 1880. Umfuli River, Mashonaland, Southern Rhodesia.

117 —19. 7. 15. 142. 24 December, 1877. Manica Plateau, North of junction of Kafue and Zambesi, North-East Rhodesia.

118 —19. 7. 15. 143. July, 1880. Mashonaland, Southern Rhodesia.

119 —19. 7. 15. 144. November, 1892. Pungwe River, Mozambique.

120–122 —19. 7. 15. 145–147. October, 1892. Pungwe River, Mozambique.

123 —19. 7. 15. 148. August, 1892. Hanyani River, Mashonaland, Southern Rhodesia.

POWELL-COTTON'S ORIBI.

Ourebia montana cottoni.

Ourebia cottoni, Thomas, Ann. Mag. Nat. Hist. ser. 8, vol. i. p. 178, 1908.
Ourebia montana cottoni, Roosevelt and Heller, Life-histories of African Game Animals, vol. ii. p. 560, 1915.

General colour bright tawny; dark frontal marking either entirely absent or very indistinctly developed. Horns with rather more distinct ridges than in the Cape Oribi.

Of the following series the finest horns (No. 19. 7. 15. 152) measure $5\frac{1}{2}$ inches in length, and have a tip to tip interval of $2\frac{1}{2}$.

Typical locality, Uasin Gishu Plateau, Kenya Colony. This Oribi inhabits the country from the southern shores of the Victoria Nyanza northwards to Mt. Elgon and towards Lake Rudolf.

124–125 —19. 7. 15. 149–150. January, 1903. Londiani, Kenya Colony.

126–133 —19. 7. 15. 151–158 Uasin Gishu Plateau, Kenya Colony.

NILE ORIBI.

Ourebia montana æquatoria.

Ourebia montana æquatoria, Heller, Smithson. Misc. Collect. vol. lx. no. 8, p. 12, 1912.

In this race the horns are smaller and less heavily ringed than in *cottoni*.

The greatest horn-length in the following series is $4\frac{9}{16}$ inches (No. 19. 7. 15. 159), with a tip to tip interval of $2\frac{3}{16}$.

Typical locality, Lado Enclave; range extends over a large portion of the Sudan, from Lake No and the Sobat River in the north, through the Bahr-el-Ghazal, and reaches as far south as the Albert Nyanza.

134 —19. 7. 15. 159. Rumbek, Bahr-el-Ghazal.
135 —19. 7. 15. 160. Barlgerut, Bahr-el-Ghazal.
136–137 —19. 7. 15. 161–162. Bahr-el-Ghazal.

CAPE STEINBUCK.

Raphicerus campestris campestris.

Capra grimmia, Thunberg, Reise, vol. ii. p. 8, 1789, *nec* Linn.
Antilope campestris, Thunberg, Mém. Ac. Sci. St. Pétersb. vol. iii. p. 313, 1811.
Antilope (*Raphicerus*) *acuticornis*, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 252, vol. v. p. 342, 1827.
Antilope (*Raphicerus*) *subulata*, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 253, vol. v. p. 342, 1827.
Calotragus campestris, Gray, Cat. Ungulata Brit. Mus. p. 71, 1852.
Raphicerus campestris, Sclater and Thomas, Book of Antelopes, vol. ii. p. 41, pl. xxvii. fig. 1, 1896; vol. iv. p. 225, 1900.
Raphicerus campestris campestris, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 149, 1914.

Considerably smaller than the Oribis, and without the bare patch below the ear or tufts on knees. Horns slender and very sharply pointed, basal half slightly ridged. Tail short. Lateral hoofs absent. General colour yellowish rufous, rather darker on head, crown usually dark brown.

Horn measurements (No. 19. 7. 15. 163):—length $3\frac{1}{2}$; spread from tip to tip 1.

Typical locality, South Africa; the Cape Steinbuck appears to be confined to Cape Colony and the Orange River Colony. The

other South African Steinbucks in the collection have been referred to the Transvaal race, *R. c. capricornis* (*infra*).

138 —19. 7. 15. 163. November, 1875. Griqua Town, Griqualand West.

TRANSVAAL STEINBUCK.

Raphicerus campestris capricornis.

Raphicerus neumanni capricornis, Thomas and Schwann, Proc. Zool. Soc. 1906, p. 584.

Raphicerus campestris capricornis, Lydekker, Game Animals of Africa, p. 181, 1908.

Closely allied to the typical race; the dark coronal marking very indistinct.

The best horns in the series are those of No. 19. 7. 15. 167:—length $4\frac{3}{4}$; spread from tip to tip 2.

Typical locality, Klein Letaba, Transvaal.

139 —19. 7. 15. 164. August, 1892. East Mashonaland, Southern Rhodesia.

140 —19. 7. 15. 165. July, 1895. Salisbury, Southern Rhodesia.

141 —19. 7. 15. 166. 30 September, 1884. Sode Gara, North Kalahari, Bechuanaland.

142 —19. 7. 15. 167. August, 1892. Hanyani River, Mashonaland, Southern Rhodesia.

143 —19. 7. 15. 168. 30 September, 1884. Metsi butluku, North Kalahari, Bechuanaland.

EAST AFRICAN STEINBUCK.

Raphicerus campestris neumanni.

Pediotragus neumanni, Matschie, Sitzber. Ges. nat. Freunde, 1894, p. 122; Säugeth. Deutsch-Ostafrika, p. 120, 1895.

Raphicerus neumanni, Sclater and Thomas, Book of Antelopes, vol. ii. p. 47, 1896.

Raphiceros campestris (?) *neumanni*, Hunter in Bryden, Great and Small Game of Africa, p. 253, 1899.

General colour much as in the typical form, the white facial markings rather more prominent and the dark coronal patch usually very indistinct or absent. Horns slightly larger.

No. 19. 7. 15. 169 has the longest horns of the series:—length $5\frac{1}{8}$; spread from tip to tip $1\frac{7}{8}$.

Typical locality, Mount Gurui, Northern Ugogo, Tanganyika Territory; range extends throughout the greater part of Kenya Colony from Tanganyika Territory to as far north as Mounts Elgon and Kenya.

144 —19. 7. 15. 169. 19 December, 1902. Enderit River, south of Lake Nakuru, Kenya Colony.

145 —19. 7. 15. 170. 31 January, 1903. Enderit River, south of Lake Nakuru, Kenya Colony.

146 —19. 7. 15. 171. 1 February, 1903. Near Lake Nakuru, Kenya Colony.

147–149 —19. 7. 15. 172–174. Uasin Gishu Plateau, Kenya Colony.

GRYSBOK.

Raphiceros (Nototragus) melanotis.

Antilope melanotis, Thunberg, Mém. Ac. Sci. St. Pétersb. vol. iii. p. 312, 1811.

Raphicerus melanotis, Sclater and Thomas, Book of Antelopes, vol. ii. p. 35, pl. xxvii. fig. 2, 1896.

Raphiceros melanotis, Lydekker, Great and Small Game of Africa, p. 249, 1899; Game Animals of Africa, p. 178, 1908.

Nototragus melanotis, Thomas and Schwann, Abstr. Proc. Zool. Soc. 1906, p. 10; Proc. Zool. Soc. 1906, vol. i. p. 168.

Raphiceros (*Nototragus*) *melanotis*, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 155, 1914.

The presence of lateral hoofs, large size of ears, and smaller horns readily distinguish this species from the Steinbuck. Height at shoulder about 22 inches.

The horns of the mounted head (No. 19. 7. 15. 175) measure as follows:—length $3\frac{9}{16}$; spread from tip to tip $1\frac{7}{8}$.

Typical locality, Cape Colony; the species is found as far north as the Zambesi.

150 —19. 7. 15. 175. 3 November, 1896. Houts River Valley, Table Mt., Cape Colony.

151 —19. 7. 15. 176. Horns. December, 1891. Umvukwe Hills, near Hanyani River, Mashonaland, Southern Rhodesia.

152 —19. 7. 15. 177. Horns. October, 1878. Machabi Hills, Mashonaland, Southern Rhodesia.

KENYA PIGMY ANTELOPE.

Nesotragus moschatus akeleyi.

Nesotragus moschatus akeleyi, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 1, 1913.

Very closely related to the Zanzibar Pigmy Antelope, *Nesotragus moschatus moschatus*; general colour rather darker, the upper parts being chestnut brown. White of throat divided by a fulvous band. Size as in typical form, about 13 to 14 inches at shoulder.

Horn measurements:—length $2\frac{3}{4}$; spread from tip to tip $1\frac{3}{16}$.

Typical locality, Mt. Kenya, Kenya Colony. In the "Life-histories of African Game Animals" by Roosevelt and Heller (vol. ii. p. 551, 1915) the range is given as "highland forest area of Mt. Kenia, the Aberdare Range, and the Kikuyu Escarpment south as far as Nairobi and Ngong."

153 —19. 7. 15. 180. Kenya Province, Kenya Colony.

DESERT PIGMY ANTELOPE.

Nesotragus moschatus deserticola.

Nesotragus moschatus deserticola, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 2, 1913.

Distinguished from the typical race and *N. m. akeleyi* by the lighter colour of the pelage. The white on the throat is said to be almost continuous, broken only by a narrow fulvous band.

Horn measurements (No. 19. 7. 15. 178):—length $3\frac{3}{8}$; spread from tip to tip $1\frac{5}{8}$.

Typical locality, Maji ya Chumvi, Taru Desert; range is given as the Desert country of the coastal area from the Tana River southward to the Tanganyika Territory border.

154 —19. 7. 15. 178. Skull and horns. Dar-es-Salam, Tanganyika Territory.

155 —19. 7. 15. 179. Horns. Dar-es-Salam, Tanganyika Territory.

ZULULAND PIGMY ANTELOPE.

NESOTRAGUS LIVINGSTONIANUS ZULUENSIS.

Nesotragus livingstonianus zuluensis, Thomas, Ann. Mag. Nat. Hist. ser. 7, vol. ii. p. 317, 1898.

Size rather larger than in *moschatus*, height at shoulder 14 to 15 inches. Horns relatively long, more distinctly ridged than in *moschatus*, and stouter than in the typical *livingstonianus*. General colour greyer.

Horn measurements (No. 19. 7. 15. 181) :—length $4\frac{1}{8}$; circumference 2; spread from tip to tip 1.

Typical locality, Umkuja Valley, Zululand; range extends as far north as Tette, Mozambique.

156–157 —19. 7. 15. 181–182. Horns. Tembe River, near Delagoa Bay, Lorenço Marques.

Subfamily **MADOQUINÆ.**

CAVENDISH'S DIK-DIK.

RHYNCHOTRAGUS KIRKI CAVENDISHI.

Madoqua cavendishi, Thomas, Proc. Zool. Soc. 1898, p. 278.

Rhynchotragus cavendishi, Lönnberg, Arkiv Zool. vol. iv. no. 3, p. 2, 1907.

Madoqua (Rhynchotragus) cavendishi, Lydekker, Game Animals of Africa, p. 193, 1908.

Rhynchotragus kirki cavendishi, Roosevelt and Heller, Life-histories of African Game Animals, vol. ii. p. 632, 1915.

All the members of the subfamily *Madoquinæ* are of small size, the shoulder height varying from $11\frac{1}{4}$ to 15 inches; the females are larger than the males. In the present race the general build is rather heavier than in the two following forms; height at shoulder about 15 inches. General colour dark reddish fawn suffused with grey on the hind quarters; a rich buff colour separates the darker dorsal region from the light underparts. Proboscis but little developed, the nasals not markedly diminished in size.

Best horn measurements (No. 19. 7. 15. 185) :—length $3\frac{3}{8}$; spread from tip to tip $1\frac{1}{2}$.

In the original description the typical locality was given as probably the Lake Rudolf district. In view of recent discoveries

there can be but little doubt that the type was collected by Cavendish not near Lake Rudolf, but somewhere near or south of Lake Baringo, where this form is now found. It is distributed all along the Rift Valley from Lake Baringo to as far south as the Tanganyika Territory border.

158–160 —19. 7. 15. 183–185. December, 1892. Lake Elmenteita, Naivasha District, Kenya Colony.

161–162 —19. 7. 15. 186–187 (male and female). Skins, mounted. 23 December, 1892. Lake Elmenteita, Naivasha District, Kenya Colony.

163 —19. 7. 15. 188 (female, immature). Skin, mounted. Lake Elmenteita, Naivasha District, Kenya Colony.

164 —19. 7. 15. 189 (female). 31 January, 1902. Near Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

165 —19. 7. 15. 190 (female). 2 February, 1903. Near south end of Lake Nakuru, Naivasha District, Kenya Colony.

LESSER JUBALAND DIK-DIK.

Rhynchotragus kirki minor.

Rhynchotragus cavendishi minor, Lönnberg, Ann. Mag. Nat. Hist. ser. 8, vol. ix. p. 65, 1912; K. Svenska Vet.-Ak. Handl. vol. xlviii. no. 5, p. 158, 1912.

Rhynchotragus kirki minor, Roosevelt and Heller, Life-histories of African Game Animals, vol ii. p. 629, 1915.

Distinguished from *cavendishi* by its smaller size and paler colour; height at shoulder about 13½ inches. The horns are considerably smaller, the average length in the following series being about 2½ inches. The proboscis is not markedly elongated, but a little more so than in *cavendishi*.

Type locality, Northern Guaso Nyiro, below Chanler Falls, Jubaland Province, Kenya Colony. This Dik-dik is found all along the Northern Guaso Nyiro Valley.

166–167 —19. 7. 15. 191–192. February, 1912. Northern Guaso Nyiro, Kenya Colony.

168–173 —19. 7. 15. 193–193. February and March, 1912. Northern Guaso Nyiro, Kenya Colony.

174 —19. 7. 15. 199. Head-skin and skull. 16 February, 1912. Northern Guaso Nyiro, Kenya Colony.

175–176 —19. 7. 15. 200–201. Skins, mounted. February, 1912. Northern Guaso Nyiro, Kenya Colony.

177–178 —19. 7. 15. 202–203 (females). Skins, mounted. 1912. Northern Guaso Nyiro, Kenya Colony.

NYIKA DIK-DIK.

Rhynchotragus kirki nyikæ.

Rhynchotragus kirki nyikæ, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 3, 1913.

General colour rather richer than in the Guaso Nyiro race, approaching that of *cavendishi*, but without the dark speckling. Distinguished from the typical form by its larger size, equalling that of *R. k. hindei*; height at shoulder 13 inches.

The best horns in the following series (No. 19. 7. 5. 209) measure $2\frac{1}{2}$ inches in length, and the interval between tips $1\frac{1}{2}$.

Typical locality, Ndi, near Voi, Taita and Taveta District, Kenya Colony. The range is given by Roosevelt and Heller* as extending from the eastern and northern slopes of Mt. Kilimanjaro northward to the Tana River.

179 —19. 7. 15. 204. November, 1915. Voi, Taita and Taveta District, Kenya Colony.

180 —19. 7. 15. 205. 28 December, 1915. Maungu, Taita and Taveta District, Kenya Colony.

181 —19. 7. 15. 206. 21 January, 1916. Maungu, Taita and Taveta District, Kenya Colony.

182 —19. 7. 15. 207. Head-skin and skull. 28 December, 1915. Maungu, Taita and Taveta District, Kenya Colony.

183 —19. 7. 15. 208. 1915–16. Taita and Taveta District, Kenya Colony.

184 —19. 7. 15. 209. Skin, mounted. 1915–16. Taita and Taveta District, Kenya Colony.

185 —19. 7. 15. 210 (female). Skin, mounted. 1915–16. Taita and Taveta District, Kenya Colony.

SMITH'S DIK-DIK.

Rhynchotragus guentheri smithi.

Madoqua guentheri smithi, Thomas, Proc. Zool. Soc. 1900, p. 804.

Rhynchotragus guentheri smithi, Lönnberg, Arkiv Zool. vol. iv. no. 3, p. 2, 1907.

* Life-histories of African Game Animals, vol. ii. p. 630, 1915.

Size considerably larger than in the other Dik-diks inhabiting the valley of the Northern Guaso Nyiro, with the proboscis greatly elongated, the nasals being extremely short. No lateral rufous marking, the greyish-buff dorsal coloration passing directly into the white of the underparts.

Horn measurements of No. 19.7.15. 211:—length 3; spread from tip to tip $1\frac{3}{8}$.

Typical locality, Lake Stephanie district; range from the Northern Guaso Nyiro and north bank of the Tana River northwards through the Lake Rudolf and Lake Stephanie regions to Southern Abyssinia.

186 —19.7.15.211. 7 February, 1912. Northern Guaso Nyiro, Kenya Colony.

187 —19.7.15.212. 5 April, 1912. Northern Guaso Nyiro, Kenya Colony.

188 —19.7.15.213. 5 February, 1912. Northern Guaso Nyiro, Kenya Colony.

189 —19.7.15.214. Skin, mounted. 26 February, 1912. Northern Guaso Nyiro, Kenya Colony.

190–191 —19.7.15.215–216. Skins, mounted. February and April, 1912. Northern Guaso Nyiro, Kenya Colony.

192–195 —19.7.15.217–220 (females). Skins, mounted. February and March, 1912. Northern Guaso Nyiro, Kenya Colony.

196–197 – 19.7.15.221–222 (females). Skins, mounted. 1912. Northern Guaso Nyiro, Kenya Colony.

Subfamily **REDUNCINÆ.**

VAAL RHEBOK.

PELEA CAPREOLUS.

Antilope capreolus, Bechstein, Uebersicht vierfüss. Thiere, vol. i. p. 98, 1799; vol. ii. p. 646, 1800.

Redunca capreolus, A. Smith, S. African Quart. Journ. vol. ii. p. 211, 1834.

Pelea capreolus, Gray, Cat. Ungulata Brit. Mus. p. 90, 1852; Cat. Ruminants Brit. Mus. p. 29, 1872; Hand-List Ruminants Brit. Mus. p. 99, 1873.

The only genus of the subfamily *Reduncinæ* in which foot-glands are found, occurring on all four limbs; inguinal glands

absent. Size medium, height at shoulder 29 to 30 inches. Horns almost vertical, sharply pointed, and with well-marked rings on the basal portion; good horns are from 8 to $11\frac{1}{2}$ inches in length. Coat woolly; general colour greyish fawn with dark patch on chin.

The horns of the mounted head in the Collection measure $8\frac{1}{4}$ inches in length, and $2\frac{7}{8}$ inches from tip to tip.

Typical locality, Cape Colony; the species is fairly widely distributed in South Africa, extending into Southern Rhodesia, but is not found north of the Zambesi.

198 —19.7.15.223. April, 1895. Fairfield, near Caledon, Cape Colony.

199 —19.7.15.224. Horns. Caledon District, Cape Colony.

RIETBOK, or REEDBUCK.

Redunca (Eleotragus) arundinum arundinum.

Antilope arundinum, Boddaert. Elenchus Anim. p. 141, 1785.

Antilope eleotragus, Schreber, Säugthiere, pl. cclxvi., 1787.

Antilope (Redunca) eleotragus, H. Smith, Griffith's Animal Kingdom, vol. v. p. 337, 1827.

Redunca eleotragus, A. Smith, S. African Quart. Journ. vol. ii. p. 210, 1834.

Eleotragus isabellinus, Gray, List Mamm. Brit. Mus. p. 165, 1843.

Eleotragus arundinaceus, Gray, Ann. Mag. Nat. Hist. ser. 1, vol. xviii. p. 232, 1846; ser. 2, vol. viii. p. 144, 1851; List Osteol. Brit. Mus. p. 57, 1847; Knowsley Menagerie, p. 12, 1850; Proc. Zool. Soc. 1850, p. 126; Cat. Ungulata Brit. Mus. p. 91, 1852; Cat. Ruminants Brit. Mus. p. 18, 1872; Hand-List Ruminants Brit. Mus. p. 88, 1873.

Cervicapra arundinacea, Selous, Proc. Zool. Soc. 1881, p. 758; A Hunter's Wanderings in S. Africa, p. 216, 1881.

Cervicapra arundinum, Flower and Lydekker, Study of Mammals, p. 340, 1891.

Redunca arundinum, Trouessart, Cat. Mamm., Suppl. p. 721, 1905.

Redunca (Eleotragus) arundinum, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 203, 1914.

Redunca arundinum arundinum, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 206, 1914.

The larger size and longer and much heavier horns distinguish this species from all the other members of the genus *Redunca*. Height at shoulder about 36 inches. Horns in fine specimens, from 15 to $17\frac{1}{2}$ inches in length.

No. 19. 7. 15. 225 possesses the best horns of the series:—length on front curve $15\frac{1}{8}$; circumference 6; spread from tip to tip $11\frac{1}{4}$.

Typical locality, Cape Colony. This Reedbuck is very widely distributed, extending northwards across the Zambesi and penetrating as far north as the Bahr-el-Ghazal. It is probable that, when further material is available for examination, several distinct races will have to be recognized. At present, the only other form known is the Fort Jackson Reedbuck, *Redunca arundinum occidentalis* *, which differs from the typical race in being rather paler and greyer in colour, and in possessing horns that appear stouter and less curved.

200 —19. 7. 15. 225. 30 December, 1877. Near Sitanda, south of Lukanga River, North-East Rhodesia.

201 —19. 7. 15. 226. 3 October, 1882. Near Umfuli River, Mashonaland, Southern Rhodesia.

202 —19. 7. 15. 227. September, 1880. Near Umfuli River, Mashonaland, Southern Rhodesia.

203 —19. 7. 15. 228. September, 1896. Usutu River, Maputo, South Mozambique.

204 —19. 7. 15. 229. August, 1892. Source of Umsengaisi River, Mashonaland, Southern Rhodesia.

205 —19. 7. 15. 230. December, 1891. Hanyani River, Mashonaland, Southern Rhodesia.

206 —19. 7. 15. 231. August, 1892. Hanyani River, Mashonaland, Southern Rhodesia.

207 —19. 7. 15. 232. 2 December, 1880. Tati River, Tati District, Southern Rhodesia.

208 —19. 7. 15. 233. 1 November, 1879. Sunta Outlet, Chobe River, North Bechuanaland.

209 —19. 7. 15. 234. 5 November, 1879. South bank of Chobe River, beyond Sunta Outlet, North Bechuanaland.

WARD'S REEDBUCK.

REDUNCA REDUNCA WARDI.

Cervicapra bohor, Sclater, List Anim. Zool. Gardens, p. 144, 1883.

Cervicapra redunca wardi, Thomas, Ann. Mag. Nat. Hist. ser. 7, vol. vi. p. 304, 1900.

Redunca redunca wardi, Trouessart, Cat. Mamm., Suppl. p. 722, 1905.

* Rothschild, Proc. Zool. Soc. 1907, p. 237.

Ward's Reedbuck is very closely allied to the Abyssinian Bohor, the chief distinguishing character being the greater size of the horns, which have the points turned inwards more than in the Abyssinian race. Good horns measure from 10 to $13\frac{3}{4}$ inches in length; the best in the following series is No. 19.7.15.239:—length on front curve $10\frac{3}{4}$; circumference 6; spread from tip to tip $6\frac{3}{4}$.

Typical locality, Mau Plateau, Kenya Colony; found throughout the greater part of Kenya Colony, in the south reaching Tanganyika Territory and extending northwards into Uganda.

210–214 —19.7.15.235–239. Uasin Gishu Plateau, Kenya Colony.
215–217 —19.7.15.240–242. Uasin Gishu Plateau, Kenya Colony.

ROOI RHEBOK.

Redunca fulvorufula fulvorufula.

Antilope fulvorufula, Afzelius, Nova Acta Soc. Upsal. vol. vii. p. 250, 1815.

Cervicapra fulvorufula, Sclater and Thomas, Book of Antelopes, vol. ii. p. 175, pl. xlv., 1897.

Redunca fulvorufula, Trouessart, Cat. Mamm., Suppl. p. 722, 1905.

Oreodorcas fulvorufula, Heller, Smithson. Misc. Collect. vol. lx. no. 8, p. 13, 1912.

Redunca fulvorufula fulvorufula, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 222, 1914.

Distinguished from Ward's Reedbuck by the smaller and straighter horns; good horns measure from 7 to $8\frac{7}{8}$ inches in length. The largest horns of the series (No. 19.7.15.243) measure as follows:—length on front curve $7\frac{1}{2}$; circumference 4; spread from tip to tip $2\frac{7}{8}$.

Typical locality, Eastern Cape Colony; the range includes the greater part of South East Africa south of the Zambesi.

218–219 —19.7.15.243–244. January, 1887. Near Molipololi, Bechuanaland.
220 —19.7.15.245. Horns. October, 1871. Near Colesberg, Cape Colony.
221 —19.7.15.246. October, 1871. Near Orange River, between Colesberg and Philippolis, Cape and Orange River Colonies.

CHANLER'S REEDBUCK.

Redunca fulvorufula chanleri.

Cervicapra chanleri, Rothschild, Novit. Zool. ii. p. 53, 1895.
Cervicapra fulvorufula chanleri, Jackson in Bryden, Great and Small Game of Africa, p. 317, 1899.
Redunca chanleri, Trouessart, Cat. Mamm., Suppl. p. 722, 1905.
Redunca fulvorufula chanleri, Roosevelt, African Game Trails, p. 487, 1910.

Rather smaller than the typical race and paler in colour; a dark nose stripe is sometimes present.

Best horn measurements (No. 19. 7. 15. 249) :—length on front curve 6; circumference $3\frac{1}{2}$; spread from tip to tip 4.

Typical locality, Mountains East of Mt. Kenya, Kenya Colony; range includes the greater part of Kenya Colony from the Tanganyika Territory border along the Rift Valley to Lake Rudolf and Southern Abyssinia.

222–225 —19. 7. 15. 247–250. Kenya Colony.

WATERBUCK.

Kobus ellipsiprymnus.

Antilope ellipsiprymnus, Ogilby, Proc. Zool. Soc. 1833, p. 47.
Kobus ellipsiprymnus, A. Smith, Illustr. Zool. S. Africa, Mamm. pt. xii. pls. xxviii. and xxix., 1840.

Size large, height at shoulder from 48 to 53 inches. General colour brownish grey, underparts white; a well-defined white elliptical band on rump, extending down on each side to flanks. Horns large and very distinctly ringed, good horns measuring from 30 to $36\frac{1}{4}$ inches in length.

Best horn measurements (No. 19. 7. 15. 252) :—length on front curve $30\frac{1}{2}$; circumference 10; spread from tip to tip 22.

Typical locality, between Latuku and the west coast, South Africa. The species is found throughout the greater part of South Africa north of the Limpopo. The Common Waterbuck also occurs as far north as Somaliland and Kenya Colony; several geographical races have been described from Kenya Colony and Tanganyika Territory, and no doubt the East African specimens

in the Collection represent one or more of these forms, but the distinguishing characters are so very slight that it is impossible when dealing with mounted heads only, and no exact localities, to decide to which of these races or so-called races these specimens belong.

226 —19. 7. 15. 251. 17 September, 1880. Hanyani River, Mashonaland, Southern Rhodesia.

227 —19. 7. 15. 252. 6 April, 1885. Umfuli River, Mashonaland, Southern Rhodesia.

228–229 —19. 7. 15. 253–254. October, 1892. Pungwe River, Mozambique.

230–231 —19. 7. 15. 255–256. October, 1892. Between Lake Sungwe and Pungwe River, Mozambique.

232–233 —19. 7. 15. 263–264. 1912. Northern Guaso Nyiro, Kenya Colony.

234 —19. 7. 15. 265. Skull and horns. Northern Guaso Nyiro, Kenya Colony.

DEFASSA, OR SING-SING.

KOBUS DEFASSA NZOIÆ.

Kobus defassa nzoiæ, Matschie, Sitzber. Ges. nat. Freunde, 1910, p. 417.

Size and horns much the same as in the Common Waterbuck; general colour rather richer and the elliptical white rump marking replaced by a large white patch. A great many local races of *defassa* have been described, but the distinguishing characters are unsatisfactory; and without large series of specimens from the various type localities it is impossible to determine the exact systematic value of such differences.

Best horn measurements (No. 19. 7. 15. 258) :—length on front curve $26\frac{1}{2}$; circumference $7\frac{3}{4}$; spread from tip to tip 18.

Typical locality, Uasin Gishu Plateau, Kenya Colony.

235–240 —19. 7. 15. 257–262. Kenya Colony.

LECHWE, OR LECHE.

KOBUS (ONOTRAGUS) LECHE.

Kobus leche, Gray, Knowsley Menagerie, p. 23, 1850.

Onotragus lechee, Gray, Cat. Ruminants Brit. Mus. p. 17, 1872; Handlist Ruminants Brit. Mus. p. 88, 1873.

Cobus leechi, Buckley, Proc. Zool. Soc. 1876, p. 291.

Cobus leche, Selous, Proc. Zool. Soc. 1881, p. 760; A Hunter's Wanderings in S. Africa, p. 220, 1881.
Cobus lechi, Selous, Great and Small Game of Africa, p. 299, 1899.
Kobus (*Onotragus*) *leche*, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 246. 1914.

Size intermediate between that of the Waterbucks and Kobs. Horns long and slender; good horns measure from 29 to 33½ inches.

The best of the three heads in the Collection is No. 19.7.15.266:—length on front curve 27¼; circumference 8; spread from tip to tip 14¾.

Typical locality, Zonga Valley, near Lake Ngami; the range extends northwards into Northern Rhodesia and Nyasaland.

241 —19.7.15.266. 12 July, 1879. Chobe River, beyond Sunta Outlet, North Bechuanaland.

242 —19.7.15.267. July, 1874. Swamps of Chobe River, east of Sunta Outlet, North Bechuanaland.

243 —19.7.15.268. 7 January, 1878. Lukanga River, North Rhodesia.

UGANDA KOB.

Adenota kob thomasi.

Kobus leucotis, Sclater, Proc. Zool. Soc. 1864, p. 103, *nec* Lichtenstein and Peters.
Adenota kob, Matschie, Säugethiere Deutsch-Ostafrika, p. 126, 1895.
Cobus thomasi, Sclater (ex Neumann), Proc. Zool. Soc. 1895, p. 868.
Adenota thomasi, O. Neumann, Proc. Zool. Soc. 1896, p. 193.
Cobus coba thomasi, Lydekker, Game Animals of Africa, p. 211, 1908.
Kobus kob thomasi, Roosevelt, African Game Trails, p. 487, 1910.
Adenota kob thomasi, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 11, 1913.

Larger than the typical race; rather more distinctly marked. Horns not of exceptional size, good specimens from 20 to 24¾ inches in length.

Horn measurements of No. 19.7.15.271:—length on front curve 21¾; circumference 7¾; spread from tip to tip 11.

Typical locality, Berkeley Bay, Victoria Nyanza. The Uganda Kob inhabits the area around the Victoria Nyanza, extending as

far east as Mt. Elgon and the Uasin Gishu District, and as far west as Ruwenzori. In the north it appears to reach the southern limits of the White-eared Kob on the Sudan boundary.

244 —19. 7. 15. 269. 23 June, 1909. Nzoia River, Uasin Gishu District, Kenya Colony.

245–248 —19. 7. 15. 270–273. 1909. Nzoia River, Uasin Gishu District, Kenya Colony.

WHITE-EARED KOB.

Adenota kob leucotis.

Antilope leucotis, Lichtenstein and Peters. Monatsber. Ak. Berlin, 1853, p. 164; Abh. Ak. Berlin, p. 96, 1854.

Kobus leucotis, Gerrard, Cat. Bones Mamm. Brit. Mus. p. 239, 1862.

Adenota leucotis, Heuglin, Nova Acta Ac. Cæs. Leop.-Car. vol. xxx. pt. 2, pp. 12 and 13, pl. 1. fig. 4, 1863.

Cobus (Adenota) leucotis, Revilliod, Verh. nat. Ges. Basle, vol. xxiv. p. 210, 1913.

Adenota kob leucotis, Roosevelt and Heller, Life-histories of African Game Animals, vol. ii. p. 514, 1915.

Size and horns as in *thomasi*. General colour of adult pelage very dark, almost black, the fulvous coloration existing, as a rule, only in immature males and females at all ages.

In the following series the colour variations are well shown; some of the fulvous coloured specimens are quite adult.

Best horn measurements (No. 19. 7. 15. 278):—length on front curve $21\frac{1}{4}$; circumference $6\frac{3}{4}$; spread from tip to tip 10.

Typical locality, swamps of the White Nile, about 60 miles south of Khartum. The White-eared Kob is found over a considerable part of Bahr-el-Ghazal, extending eastwards as far as the Abyssinian border.

249 — 19. 7. 15. 274. 5 March, 1911. Naam River, near Rumbek, Bahr-el-Ghazal.

250–255 —19. 7. 15. 275–280. 1911. Gell River, near Rumbek, Bahr-el-Ghazal.

PUKU.

Adenota vardoni vardoni.

Antilope vardoni, Livingstone, Missionary Travels S. Africa, p. 256 and pl. 9, p. 71, 1857.

Cobus vardoni, Selous, Proc. Zool. Soc. 1881, p. 759, pl. lxv.; A Hunter's Wanderings in S. Africa, pp. 111, 147, and 219, pl. v., 1881.

Kobus vardoni, Nicolls and Eglington, Sportsman in S. Africa, p. 43, 1892.

Adenota vardoni, Matschie, Säugethiere Deutsch-Ostafrika, p. 126, 1895.

Cobus vardoni typicus, Selous, Great and Small Game of Africa, p. 294, 1899.

Kobus (*Adenota*) *vardoni*, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 268, 1914.

Kobus vardoni vardoni, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. ii. p. 269, 1914.

General colour much as in *thomasi*; white orbital markings less prominent, backs of ears reddish brown, tips black. No black markings on legs. Horns short and stout, good specimens from 18 to 20¾ inches in length.

The two heads in the Collection have horns of moderate length only, No. 19. 7. 15. 282 measuring as follows:—length on front curve 16; circumference 6½; spread from tip to tip 6¾.

Typical locality, Chobe Valley; range extends from the Zambesi and Chobe through Northern Rhodesia as far as Lake Bangweolo.

In the Proceedings of the Zoological Society for the year 1881 (quoted above) Selous gives the following account of the distribution of this Antelope:—"The only place where I myself met with this Antelope was in a small tract of country extending along the southern bank of the Chobe for about sixty miles westwards from its junction with the Zambesi.

"They are never found at more than 200 or 300 yards from the river, and are usually to be seen cropping the short grass along the water's edge, or lying in the shade of the trees and bushes scattered over the alluvial flats which have been formed here and there by the shifting of the river's bed. Now and then a few must wander eastwards along the southern bank of the Zambesi as far as the Victoria Falls, as I saw my friend Mr. J. L. Garden

shoot one in 1874 which was standing on the very brink of the precipice. This, however, is the only one I have ever seen to the east of Umparira, though I have been several times backwards and forwards along the river's bank between that place and the Victoria Falls since. Along the Upper Zambesi from Sesheke to the Baroutse Valley the natives report them common. Why the Pookoo does not extend its range further westwards along the southern bank of the Chobe I am at a loss to understand, as there does not appear to be any change in the character of the country or vegetation to account for it."

Further information is given by Selous in his account of the Puku in "The Great and Small Game of Africa" *:—"In 1877 I visited the Chobi River a second time, and hunted for several months along its southern bank, but although this was only three years after my first visit, when I found pookoo antelopes so numerous, these animals had already become excessively scarce; in fact, had almost ceased to exist. The extermination of the pookoo in this part of Africa was due to a political convulsion amongst the Barotsi tribe on the Upper Zambesi, as, during the year 1876, shortly after the assassination of Sipopo, the chief of the Barotsi, large numbers of natives fled from their homes on the Zambesi, crossed the swamps of the Chobi, and camped all along the southern bank of that river, just in the pookoo ground. . . . . During this period of persecution no pookoos moved either farther westwards along the Chobi, or eastwards along the Zambesi towards the Victoria Falls, for although I found a few of these antelopes still surviving in their old haunts in 1877, there were absolutely none either to the east or the west of the small tract of country in which they had been so plentiful in 1874 . . . . . "

256 —19. 7. 15. 281. 7 July, 1874. South bank of Chobe River, near junction with Zambesi.

257 —19. 7. 15. 282. 12 August, 1874. South bank of Chobe River, near junction with Zambesi.

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* p. 295, 1899.

Subfamily ÆPYCEROTINÆ.

PALA, or IMPALA.

ÆPYCEROS MELAMPUS MELAMPUS.

Antilope melampus, Lichtenstein, Reise, vol. ii. p. 544, pl. iv., 1812; Mag. nat. Freunde, vol. vi. p. 167, 1814.

Æpyceros melampus, Sundevall, K. Svenska Vet.-Ak. Handl. 1845, p. 271, 1847.

Æpyceros melampus melampus, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. iii. p. 8, 1914.

In the South African Pala the horns are of medium size only and considerably more slender than in the East African race. General colour bright reddish brown; no dark blaze on face, a character that distinguishes the typical form from the Angolan *petersi*, in which the muzzle is marked with a blackish blaze.

Of the four heads in the Collection the largest horns are those of No. 19. 7. 15. 283:—length on front curve 24¼; straight line from point to base 20; circumference 5¾; spread from tip to tip 12¼.

Typical locality, Klipfontein, Little Namaqualand; range extends northwards as far as the Zambesi.

Selous* gives the following account of the distribution of the Pala in 1881:—"This Antelope I first met with on the Marico and Notuāni rivers, two tributaries of the Limpopo; and from there northwards it is to be found along the banks of every river and stream wherever I have been, except in those places where the natives have exterminated or driven them away. They are nowhere more plentiful than along the Chobe, and may often be seen in herds of from twenty to a hundred together. . . . ."

258 —19. 7. 15. 283. 14 August, 1879. South bank of Chobe River, west of Sunta Outlet, North Bechuanaland.

259 —19. 7. 15. 284. 29 July, 1877. South bank of Chobe River, west of Sunta Outlet, North Bechuanaland.

260 —19. 7. 15. 285. September, 1874. South bank of Chobe River, near junction with Zambesi.

261 —19. 7. 15. 286. 27 August, 1874. South bank of Chobe River, near junction with Zambesi.

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* Proc. Zool. Soc. 1881, p. 757.

JUBALAND IMPALA.

ÆPYCEROS MELAMPUS RENDILIS.

Æpyceros melampus rendilis, Lönnberg, K. Svenska Vet.-Ak. Handl. vol. xlviii. no. 5, p. 164, 1912.

Larger than the South African Impala with longer and stouter horns, good horns measuring on curve from 28 to 31½ inches in length. General colour brighter. The best pair of horns in the Collection (No. 19. 7. 15. 287) measure as follows:—length on curve 28½; straight line from point to base 21½; circumference 5½; spread from tip to tip 12.

Type locality, Northern Guaso Nyiro, Kenya Colony. This race is apparently distributed over a large part of Kenya Colony, from the Northern Guaso Nyiro and Turkwel River in the north, southwards towards the Tanganyika Territory boundary, where it probably merges with the closely allied race *suara* described by Matschie * from the Kilimanjaro District. It may be, that when more material is available for examination, it will be found that the Kilimanjaro and Northern Guaso Nyiro Impalas represent one race only, in which case the name given by Matschie would have to be adopted for the Impala of Kenya Colony and Tanganyika Territory.

262 —19. 7. 15. 287. 18 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

263 —19. 7. 15. 288. 19 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

264 —19. 7. 15. 289. 31 January, 1903. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

265 —19. 7, 15. 290. 2 February, 1903. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

266 —19. 7. 15. 291. 12 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

267 —19. 7. 15. 292. 2 January, 1903. Eldoma Ravine Station, Kenya Colony.

268–273 —19. 7. 15. 293–298. 1912. Northern Guaso Nyiro, Kenya Colony.

274–275 —19. 7. 15. 299–300. Kenya Province, Kenya Colony.

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* *Strepsiceros suara*, Matschie, Sitzber. Ges. nat. Freunde, 1892, p. 135, partim.

Æpyceros suara, Matschie, Säugeth. Deutsch-Ost-Afrika, p. 129, 1895.

Subfamily ANTILOPINÆ.

THOMSON'S GAZELLE.

GAZELLA THOMSONI THOMSONI.

Gazella thomsoni, Günther, Ann. Mag. Nat. Hist. ser. 5, vol. xiv. p. 427, 1884.

Gazella thomsoni thomsoni, Roosevelt and Heller, Life-histories of African Game Animals, vol. ii. p. 601, 1915.

Size medium, height at shoulder about 25 inches. Horns long and nearly parallel, good horns measure from 15 to 16½ inches in length. No dark patch on nose, a feature which distinguishes the typical race from *nasalis*.

The only specimen of the Kilimanjaro *thomsoni* in the Collection is one obtained in 1915–16. The horns of this head are almost parallel; measurements :—length on front curve 12½; circumference 3¾; spread from tip to tip 2½.

Typical locality, Kilimanjaro District; range extends from Kilimanjaro southwards to the Irangi District in Tanganyika Territory.

276 —19. 7. 15. 310. 1915–16. Taita and Taveta District, Kenya Colony.

BLACK-SNOUTED THOMSON'S GAZELLE.

GAZELLA THOMSONI NASALIS.

Gazella thomsoni nasalis, Lönnberg, Sjöstedt's Kilimandjaro-Meru Exped. p. 46, 1908.

Closely related to the typical race, distinguished by the horns being less parallel and the presence of a dark blackish spot on nose. Lydekker and Blaine * considered the Thomson Gazelle from the highlands of Kenya Colony as identical with the typical form from Kilimanjaro. There has evidently been a mistake made, as the authors state that "the absence of the nose-spot, upon which this supposed race was founded, does not appear to be a constant character of the Gazelles of this district." The race was founded

* Cat. Ungulate Mamm. Brit. Mus. vol. iii. pp. 83 and 85, 1914.

on the presence of a dark nose-spot, a character that is quite well marked in the following series.

Of the specimens obtained in 1902–3 the best pair of horns are those of No. 19. 7. 15. 301, which measure as follows:—length on front curve 14; circumference $4\frac{1}{4}$; spread from tip to tip $5\frac{5}{8}$. The average tip to tip interval of the series is $4\frac{1}{8}$ inches.

Typical locality, "Northern Uganda and Lado." The Black-snouted Thomson Gazelle is found over a very large area, inhabiting the country from Makindu in the east to the southern shores of the Victoria Nyanza in the west, and northwards through the Naivasha District to north of Lake Baringo and east of Mt. Kenya.

277 —19. 7. 15. 301. 9 January, 1903. Elmenteita Station, Naivasha District, Kenya Colony.

278 —19. 7. 15. 302. 22 December, 1902. Plain near Elmenteita Station, Naivasha District, Kenya Colony.

279 —19. 7. 15. 303. 17 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

280 —19. 7. 15. 304. 20 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

281 —19. 7. 15. 305. 25 December, 1902. Near Lake Elmenteita, Naivasha District, Kenya Colony.

282 —19. 7. 15. 306. 31 January, 1903. Between Elmenteita Station and Enderit River, Naivasha District, Kenya Colony.

283 —19. 7. 15. 307. 3 February, 1903. Between Elmenteita Station and Enderit River, Naivasha District, Kenya Colony.

284 —19. 7. 15. 308. Kenya Province, Kenya Colony.

285 —19. 7. 15. 309. Head-skin. Kenya Province, Kenya Colony.

TYPICAL GRANT GAZELLE.

Gazella granti granti.

Antilope sœmmerringii (?), Grant, Proc. Zool. Soc. 1863, p. 3, *nec* Cretzschmar.

Gazella granti, Brooke, Proc. Zool. Soc. 1872, p. 601, pl. xli.; 1873, p. 550; 1878, p. 723.

Gazella granti typica, A. H. Neumann, Great and Small Game of Africa, p. 355, 1899.

Gazella granti granti, O. Neumann, Sitzber. Ges. nat. Freunde, 1906, p. 243.

Size large, height at shoulder about 34 inches. Horns long and widely spread, approaching the condition found in *robertsi* *, the race which inhabits the country around the southern shores of the Victoria Nyanza; good horns measure from 27 to 30¼ inches in length.

The three heads of the typical race in the Collection were obtained in 1915–16 in the Taita and Taveta District; the best head (No. 19. 7. 15. 322) carries horns of the following size:—length on front curve 25; circumference 7; spread from tip to tip 19½.

Typical locality, Western Kinyene, Ugogo, Tanganyika Territory. The typical race is believed to be almost confined to Tanganyika Territory, extending northwards only a short distance into Kenya Colony.

286–288 —19. 7. 15. 321–323. 1915–16. Taita and Taveta District, Kenya Colony.

ROOSEVELT'S GRANT GAZELLE.

Gazella granti roosevelti.

Gazella granti roosevelti, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 4, 1913.

Very like the typical race, the differences between the two forms being very slight; horns less widely spread and general colour rather darker.

The best horns of the following series are those of No. 19. 7. 15. 312:—length on front curve 26¾; circumference 7½; spread from tip to tip 12⅜. The horns of the female specimen (No. 19. 7. 15. 319) measure as follows:—length on front curve 14⅛; circumference 3⅝; spread from tip to tip 9½.

Typical locality, Athi Plains, Ulu District, Kenya Colony. Distributed along the Rift Valley as far north as Lake Baringo, and eastwards to Mt. Kilimanjaro and Mt. Kenya.

289 —19. 7. 15. 311. 9 January, 1903. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

290 —19. 7. 15. 312. 10 January, 1903. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

291 —19. 7. 15. 313. 18 December, 1902. Enderit River, south end of Lake Nakuru, Naivasha District, Kenya Colony.

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* *Gazella granti robertsi*, Thomas, Proc. Zool. Soc. 1903, vol. ii. p. 119.

292 —19. 7. 15. 314. 24 December, 1902. Between Elmenteita Station and Lake Elmenteita, Naivasha District, Kenya Colony.

293 —19. 7. 15. 315. 17 December, 1902. Elmenteita Station, Naivasha District, Kenya Colony.

294 —19. 7. 15. 316. 17 January, 1903. Near Simba Station, Ulu District, Kenya Colony.

295 —19. 7. 15. 317. 20 December, 1902. South end of Lake Nakuru, Naivasha District, Kenya Colony.

296 —19. 7. 15. 318. 17 December, 1902. Near Gil-Gil Station, Naivasha District, Kenya Colony.

297 —19. 7. 15. 319 (female). 23 December, 1902. Near Lake Elmenteita, Naivasha District, Kenya Colony.

298 —19. 7. 15. 320. Kenya Province, Kenya Colony.

RAINEY'S GRANT GAZELLE.

Gazella granti raineyi.

Gazella granti raineyi, Heller, Smithson. Misc. Collect. vol. lxi. no. 7, p. 6, 1913.

Most nearly allied to *Gazella granti brighti* described by Thomas * from the Lado district; distinguished by the presence of a dark pygal band to the white rump-patch. Heller states, in his original description, that the general colour of the upper parts is darker. Horns larger and more widely spread. From *roosevelti* this race is distinguished by the horns being smaller and more parallel. The horns of this series average rather shorter and markedly less widely spread than in the specimens referred to *roosevelti*.

Best horn measurements (No. 19. 7. 15. 326) :—length on front curve $25\frac{1}{8}$; circumference $6\frac{1}{4}$; spread from tip to tip $10\frac{1}{8}$. The average tip to tip interval of the two series is as follows :—*roosevelti* (8 specimens) 13 inches, and *raineyi* (7 specimens) 8 inches.

Typical locality, junction of Northern Guaso Nyiro and Isiola Rivers. Distributed over a large area of the northern part of Kenya Colony, ranging from the north bank of the Tana River

* Proc. Zool. Soc. 1900, p. 805.

and northern slopes of Mt. Kenya, northwards across the Northern Guaso Nyiro Valley towards Lake Rudolf.

299–305 —19. 7. 15. 324–330. January and February, 1912. Northern Guaso Nyiro, Kenya Colony.

SPRINGBUCK.

Antidorcas marsupialis marsupialis.

La Gazelle à bourse sur le dos, Allamand, Schneider's ed. Buffon's Histoire Naturelle, Suppl. vol. iv. p. 142, pl. lx., 1778.

Antilope marsupialis, Zimmermann, Geogr. Geschichte, vol. ii. p. 427, 1780.

Antilope euchore, "Forst.," Zimmermann, op. cit. vol. iii. p. 269, 1783.

Gazella euchore, A. Smith, S. African Quart. Journ. vol. ii. p. 191, 1834.

Antidorcas euchore, Sundevall, K. Svenska Vet.-Ak. Handl. 1845, p. 271, 1847.

Antidorcas marsupialis, Elliot, Cat. Mamm. Field Mus. (Field Mus. Zool. Pub. no. 115, vol. viii.) p. 75, 1907.

Antidorcas marsupialis marsupialis, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. iii. p. 111, 1914.

Distinguished from the Gazelles by the presence of a large evertible dorsal gland extending from middle of back to rump, and lined with long white hairs, the absence of inguinal glands, and presence of only two pairs of lower premolars. Horns of medium size (from 14 to 19$\frac{1}{8}$ inches in length in good specimens), sub-lyrate, with incurved tips.

Best horn measurements (No. 19. 7. 15. 331) :—length on front curve 13$\frac{7}{8}$; circumference 6; spread from tip to tip 5$\frac{3}{8}$. Of the female specimens No. 19. 7. 15. 334 has exceptionally long horns, measuring 10$\frac{3}{4}$ inches in length with a tip to tip interval of 5$\frac{3}{4}$ inches.

Typical locality, probably southern Cape Colony; range includes the Orange River Colony and Bechuanaland, extending westwards into Angola.

Selous * gives the following account of the distribution of the Springbuck in South Africa in the year 1881 :—"The Springbok is still found in the north-western portions of the Cape Colony, and throughout the Free State, Transvaal, and Griqualand West,

* Proc. Zool. Soc. 1881, p. 757.

where it has not yet been exterminated. Along the borders of the Kalahari desert it is common in many parts, and on the saltpans between the Botletlie River and the waggon-road leading from Bamangwato to the Zambesi, it is also plentiful. In common with the Gemsbuck and Hartebeest, however, its northern range is bounded by the thick forests which run east and west, south of the Mābābe river. I believe that to the west of Lake Ngami it has a more extensive range northwards."

306 —19. 7. 15. 331. 10 January, 1872. Griqualand West, South Africa.

307 —19. 7. 15. 332. 20 January, 1877. Maritsani River, Bechuanaland.

308 —19. 7. 15. 333. 20 September, 1884. Near Metsi butluku, North Kalahari, Khama's Country.

309 —19. 7. 15. 334 (female). 10 January, 1881. Chwai Saltpan, Bechuanaland.

310–312 —19. 7. 15. 335–337 (females). May, 1895. Dreifontein, Orange River Colony.

GERENUK.

Lithocranius walleri.

Gazella walleri, Brooke, Proc. Zool. Soc. 1878, p. 929, pl. lvi.
Lit[*h*]*ocranius* (*Gazella*) *walleri*, Kohl, Ann. Hofmns. Wien, vol. i. p. 79, pl. 5, fig. 3, and pl. 6, fig. 1, 1886.
Lithocranius walleri, Thomas, Proc. Zool. Soc. 1891, p. 207.

Distinguished from the Gazelles and Springbuck by the great elongation of the neck and limbs, the presence of four teats, and of a bare glandular area below each eye. Lower premolars, as in *Gazella*, three pairs. Inguinal glands absent. Horns present only in males, sublyrate in type with tips curved forwards; good horns from 14 to 17 inches

Of the seven heads in the Collection No. 19. 7. 15. 339 possesses the longest horns:—length on front curve 14; circumference 5; spread from tip to tip $4\frac{3}{4}$.

Typical locality, Juba Valley. The range is very great, extending from Somaliland and southern Abyssinia southward through Jubaland, across the Northern Guaso Nyiro Valley into the Tanaland Province, and from thence through Taita

and Taveta District to north-east of Mt. Kilimanjaro, passing southwards along the Rift Valley into Tanganyika Territory.

313 —19. 7. 15. 338. 1 April, 1912. Northern Guaso Nyiro District, Kenya Colony.

314 —19. 7. 15. 339. 10 March, 1912. Northern Guaso Nyiro District, Kenya Colony.

315 —19. 7. 15. 340. January, 1912. Northern Guaso Nyiro District, Kenya Colony.

316 —19. 7. 15. 341. 30 March, 1912. Northern Guaso Nyiro District, Kenya Colony.

317 —19. 7. 15. 342. 15 March, 1912. Northern Guaso Nyiro District, Kenya Colony.

318 —19. 7. 15. 343. 13 March, 1912. Northern Guaso Nyiro District, Kenya Colony.

319 —19. 7. 15. 344. 14 February, 1912. Northern Guaso Nyiro District, Kenya Colony,

Subfamily **ORYGINÆ.**

GEMSBUCK.

Oryx gazella.

Capra gazella, Linn. Syst. Nat. ed. 10, vol. i. p. 69, 1758; ed. 12, vol. i. p. 96, 1766.

Antilope oryx, Pallas, Spicil. Zool. fasc. xii. pp. 16 and 61, 1777.

Cerophorus (*Oryx*) *oryx*, Blainville, Bull. Soc. Philom. 1816, p. 75.

Onyx onyx, Gray, Medical Repository, vol. xv. p. 307, 1821, misprint for *Oryx oryx*.

Oryx oryx, Jardine, Naturalist's Libr., Mamm. vol. xi. p. 204, 1835.

Oryx capensis, Ogilby, Proc. Zool. Soc. 1836, p. 139.

Oryx gazella, Gray, List Mamm. Brit. Mus. p. 156, 1843; Ann. Mag. Nat. Hist. ser. 1, vol. xviii. p. 232, 1846; Proc. Zool. Soc. 1850, p. 134; Knowsley Menagerie, p. 17, 1850; Cat. Ungulata Brit. Mus. p. 105, 1852; Cat. Ruminants Brit. Mus. p. 35, 1872; Hand-List Ruminants Brit. Mus. p. 104, 1873.

The Gemsbuck is the largest member of the genus, the height at shoulder about 48 inches. Hair long and rough, very different to the short-haired coat of the East African Beisa. Dark markings on face very prominent, the frontal or nose-patch communicating with dark eye-stripe and continued on to throat; dark throat marking without any median light patch or stripe, such as always occurs in *O. beisa annectens*. Horns longer than in the East

African Beisa and straighter; fine horns measure from 43 to 47½ inches in length.

The best horns in the Collection (No. 19. 7. 15. 348) measure as follows:—length on front 42½; circumference 7; spread from tip to tip 19¼. Of the males No. 19. 7. 15. 349 has the longest horns; measurements:—length on front 37; circumference 8; spread from tip to tip 18⅞.

Typical locality, some part of the desert areas of south-western Africa, between Bechuanaland and Mossamedes; the species is found as far north as Elephant Bay, Benguella, Angola.

It was not until May 11th, 1879, that Selous secured his first Gemsbuck, an immature cow shot near the Botletlie River. A few days later (May 15) he killed an adult female, which carried 42-inch horns, at the same locality.

320 —19. 7. 15. 345. April, 1888. North of Makari-kari Saltpan, Nata River, North Kalahari.

321–323 —19. 7. 15. 346–348 (females). April, 1888. North of Makari-kari Saltpan, Nata River, North Kalahari.

324 —19. 7. 15. 349. 21 June, 1884. Near Metsi butluku, North Kalahari, Khama's Country.

325 —19. 7. 15. 350 (female). 23 June, 1884. Near Metsi butluku, North Kalahari, Khama's Country.

326 —19. 7. 15. 351 (female). 22 September, 1884. Near Metsi butluku, North Kalahari, Khama's Country.

327 —19. 7. 15. 352 (female). 11 May, 1879. Botletlie River, Khama's Country.

328 —19. 7. 15. 353 (female). 15 May, 1879. Botletlie River, Khama's Country.

329 —19. 7. 15. 354. 16 September, 1884. Sode Gara Vley, North Kalahari.

330–331 —19. 7. 15. 355–356. Horns. Bechuanaland.

IBEAN BEISA.

Oryx beisa annectens.

Oryx annectens, Hollister, Smithson. Misc. Collect. vol. lvi. no. 2, p. 7, 1910.

Oryx beisa annectans, Ward, Records of Big Game, ed. 6, p. 293, 1910.

Size smaller than in the South African Gemsbuck, with smaller and less widely spread horns; good horns measure from 34 to 39 inches in length. Face markings much as in *O. gazella*, but

the nose-patch is narrower and not connected with the eye-stripes; no fringe or tuft on throat. This race appears to be intermediate between the Abyssinian *Oryx beisa gallarum* and the Kilimanjaro Fringed-eared Beisa, *Oryx beisa callotis*. It is very much greyer in colour than the Abyssinian form, and may be distinguished at once from *callotis* by the absence of the long dark ear-fringes.

Best horn measurements (No. 19. 7. 15. 359) :—length on front 34; circumference $6\frac{1}{2}$; spread from tip to tip $9\frac{1}{2}$.

Typical locality, Laikipia Plateau, Laikipia District, Kenya Colony. Range extends from the north bank of the Tana River across the northern slopes of Mt. Kenya to Lake Baringo, and northwards across the Northern Guaso Nyiro and along the Turkwel River to Lake Rudolf and towards the Abyssinian border.

332–334 —19. 7. 15. 357–359. 1912. Northern Guaso Nyiro District, Kenya Colony.

335 —19. 7. 15. 360 (female). 1912. Northern Guaso Nyiro District, Kenya Colony.

336–340 —19. 7. 15. 361–365 (sex not recorded). 1912. Northern Guaso Nyiro District, Kenya Colony.

341–342 —19. 7. 15. 366–367 (sex not recorded). Sungari Rongai River, Kenya Province, Kenya Colony.

ROAN ANTELOPE.

Hippotragus equinus equinus.

Antilope equina, Desmarest, Nouv. Dict. Hist. Nat. vol. xxiv. p. 4, and Tabl. p. 32, 1804; Mammalogie, vol. ii. p. 476, 1822.

Aigoceros barbata, A. Smith, S. African Quart. Journ. vol. ii. p. 186, 1834.

Aigoceros equinus, A. Smith, op. cit. p. 185, 1834.

Hippotragus equinus, Sundevall, K. Svenska Vet.-Ak. Handl. 1844, p. 197, 1846.

Hippotragus equinus typicus, Sclater and Thomas, Book of Antelopes, vol. iv. p. 13, 1899.

Hippotragus equinus equinus, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. iii. p. 136, 1914.

Size large, height at shoulder occasionally as much as 60 inches. Horns stout, comparatively short, cylindrical, and heavily ridged; good horns from 30 to 34 inches in length. General colour

greyish mixed with reddish brown; face vandyke brown with prominent white patches above and extending in front of eyes, the white hairs in anterior part of considerable length. Light marking behind eyes. Muzzle, sides of nose, and chin white.

Horn measurements (No. 19.7.15.375):—length on front curve 32; circumference $9\frac{1}{2}$; spread from tip to tip 12. The horns of the females are not nearly so heavy, the largest of the series (No. 19.7.15.377) measuring as follows:—length on front curve $30\frac{1}{2}$; circumference 7; spread from tip to tip $7\frac{3}{8}$.

Typical locality, South Africa north of the Orange River, the range extending as far north as Northern Rhodesia.

Selous* gives the following account of the distribution of the Roan Antelope in South Africa during the period 1871–1881:—"I have twice met with the Roan Antelope to the south of Bamangwato—once on the Limpopo and once on the Notuani. In the neighbourhood of the Tati in south-western Matabele Land it is not uncommon, and all along the road from there to the Zambesi it may be met with, though nowhere plentiful. As far as I have been along the Chobe it is to be found sparingly, and also in the Mābābe country. Throughout the Mashuna country it is tolerably plentiful, and in the Manica country north of the Zambesi I saw a good many. In fact it is to be found over a vast extent of country in Central South Africa, but is nowhere to be met with in large numbers."

343 —19.7.15.368 (female). 3 June, 1882. Umzweswi River, Mashonaland, Southern Rhodesia.

344 —19.7.15.369. 28 July, 1883. Upper Umfuli River, Mashonaland, Southern Rhodesia.

345–346 —19.7.15.370–371. June, 1885. Upper Umfuli River, Mashonaland, Southern Rhodesia.

347 —19.7.15.372. 11 July, 1883. Hanyani River, Mashonaland, Southern Rhodesia.

348 —19.7.15.373. December, 1891. Hanyani River, Mashonaland, Southern Rhodesia.

349 —19.7.15.374. October, 1887. Near Hanyani River, Lo Magondi's Country, Mashonaland, Southern Rhodesia.

350 —19.7.15.375. August, 1892. Near Hanyani River, not far from Salisbury, Southern Rhodesia.

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* Proc. Zool. Soc. 1881, p. 756.

351 —19. 7. 15. 376. Skin, mounted. July, 1892. Hanyani River, Mashonaland, Southern Rhodesia.

352 —19. 7. 15. 377 (female). 10 July, 1883. Near source of Hanyani River, Mashonaland, Southern Rhodesia.

SABLE ANTELOPE.

Hippotragus niger niger.

Aigocerus niger, Harris, Proc. Zool. Soc. 1838, p. 2; Trans. Zool. Soc. vol. ii. p. 213, pl. xxxix., 1838; Portraits Wild Animals S. Africa, p. 126, pl. xxiii., 1840; Wild Sports S. Africa, ed. 5, pp. 216 and 349, pl. xxii., 1852.

Hippotragus niger, Sundevall, K. Svenska Vet.-Ak. Handl. 1844, p. 197, 1846.

Hippotragus niger niger, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. iii. p. 143, 1914.

Size rather smaller than in the Roan Antelope; shoulder-height about 52 to 54 inches. Horns considerably longer and more compressed; good horns measure 45 inches or more in length. In some animals the horns are nearly parallel, in others widely spread. Female horns shorter and more slender in build. General colour very dark brown, the coat appearing quite glossy; rump, front of thighs, and belly white, the white underparts sharply contrasting with the dark flanks. Face markings somewhat like those of the Roan, but no light patches behind eyes, and the dark frontal and nasal marking extends almost to end of nose; below this is a well-defined white lateral face stripe, communicating posteriorly with the white tufted areas above eyes. A dark eye-stripe extends along sides of face to just below posterior border of nostril. Lips, muzzle, sides and underparts of lower jaw white. In the females the coat is never as dark as in the adult males, a rufous tint predominating.

Best horn measurements (No. 19. 7. 15. 393):—length on front curve $44\frac{1}{2}$, circumference $9\frac{1}{2}$; spread from tip to tip $8\frac{1}{4}$. This specimen has the smallest tip to tip interval of the male heads in the Collection; the greatest spread is in No. 19.7.15.387, where the horn-tips are $19\frac{1}{2}$ inches apart. Of the females No. 19. 7. 15. 380 possesses the finest horns:—length on front curve $39\frac{1}{4}$; circumference $6\frac{3}{4}$; spread from tip to tip $6\frac{5}{8}$.

Typical locality, Cashan Mountains, North-western Transvaal; the range extending as far north as North West Rhodesia.

Writing in 1881 * Selous makes the following statement about the distribution of the Sable Antelope:—"At the present day a few Sable Antelopes are still to be found in South-western Matabele Land, in the neighbourhood of Ramokwebani, Shashani, and Samookwe rivers (tributaries of the Shashe). Along the waggon-road leading from Tati to the Zambesi it may be met with here and there, but is decidedly scarce. All along the Chobe river, as far as I have been, I have met with this Antelope, though sparingly. In the Mābābe country, and on the road leading from there to Bamangwato, I neither saw a Sable Antelope nor the spoor of one, and do not think its range extends so far to the west. In the broken country to the south of the Victoria Falls, in the neighbourhood of the Pendamatenka and Daka rivers, it is not uncommon, but its true home is the higher portions of the Mashuna country to the north-east of the Matabele country . . . . . On the Manica plateau, north of the Zambesi, Sable Antelopes are also to be met with."

353 —19. 7. 15. 378. 30 May, 1882. Umniati River, Mashonaland, Southern Rhodesia.

354 —19. 7. 15. 379. 8 September, 1878. Umzweswi River, Mashonaland, Southern Rhodesia.

355 —19. 7. 15. 380 (female). Umzweswi River, Mashonaland, Southern Rhodesia.

356 —19. 7. 15. 381. 22 September, 1880. Umfuli River, Mashonaland, Southern Rhodesia.

357 —19. 7. 15. 382. 16 October, 1880. Umfuli River, Mashonaland, Southern Rhodesia.

358 —19. 7. 15. 383 (female). October, 1880. Umfuli River, Mashonaland, Southern Rhodesia.

359 —19. 7. 15. 384 (female). 30 June, 1883. Umfuli River, Mashonaland, Southern Rhodesia.

360 —19. 7. 15. 385. 15 July, 1879. Southern bank of Chobe River, west of Sunta Outlet, North Bechuanaland.

361 —19. 7. 15. 386. August, 1883. Hanyani River, Mashonaland, Southern Rhodesia.

362 —19. 7. 15. 387. 6 September, 1883. Hanyani River, Mashonaland, Southern Rhodesia.

363 —19. 7. 15. 388. Skin, mounted. July, 1892. Hanyani River, Mashonaland, Southern Rhodesia.

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* Proc. Zool. Soc. 1881, p. 756.

364 —19. 7. 15. 389. 12 October, 1883. Near source of Hanyani River, Mashonaland, Southern Rhodesia.

365 —19. 7. 15. 390. October, 1880. Mashonaland, Southern Rhodesia.

366 —19. 7. 15. 391. September, 1891. Near Mazoe River, North-eastern Mashonaland, Southern Rhodesia.

367 —19. 7. 15. 392. November, 1891. Near Mazoe River, North-eastern Mashonaland, Southern Rhodesia.

368 —19. 7. 15. 393. April, 1892. Matoko's Country, Mangwendi, Eastern Mashonaland, Southern Rhodesia.

Subfamily TRAGELAPHINÆ.

HIGHLAND BUSHBUCK.

TRAGELAPHUS SCRIPTUS DELAMEREI.

Tragelaphus delamerei, Pocock, Ann. Mag. Nat. Hist. ser. 7, vol. v. p. 95, 1900.

Tragelaphus scriptus delamerei, Lydekker, Game Animals of Africa, p. 324, 1908.

A large Bushbuck, in the adult stage very richly coloured. Head and sides of face bright rufous-buff with dark nose-stripe; across the latter there sometimes occurs a white chevron marking. Two well-defined white spots below eye. General colour dark brown sprinkled with buff. Indistinct white stripes on flanks and spots on haunches. The type of this race is an immature female, the colour of the coat being considerably paler than in the adult phase. Neither of the two heads in the Collection has the white chevron marking on the face. Horns fairly large, good horns measuring 16 inches in length.

Horn measurements:—No. 19. 7. 15. 394: length on front curve $12\frac{1}{4}$; circumference $5\frac{1}{2}$; spread from tip to tip $6\frac{1}{2}$. No. 19. 7. 15. 395: length on front curve $15\frac{3}{4}$; circumference 6; spread from tip to tip 7.

Typical locality, Sayer, north-east of Laikipia Plateau, Kenya Colony. The range is extensive, including the greater part of Kenya Colony from Lake Rudolf and north-western Uganda southwards to the southern shores of the Victoria Nyanza in Tanganyika Territory, and eastward to Kilimanjaro. This race does

not extend to the coast, the Bushbuck of the Seyidie and Tanaland Provinces being separated as a distinct race under the name *Tragelaphus scriptus olivaceus* *.

From examination of the material in the Museum Collection and views expressed by recent observers in the field it appears that the forms described under the names *tjæderi*, *brunneus*, and *eldomæ* must be regarded as having been founded merely on various colour phases of *delamerei*. The type localities of these three forms are only a short distance from Sayer, the type locality of *delamerei*, the distances varying from 70 to 120 miles.

369 —19.7.15.394. 5 January, 1903. Londiani Station, Uasin Gishu District, Kenya Colony.

370 —19.7.15.395. 1912. Northern Guaso Nyiro, Kenya Colony.

CHOBE BUSHBUCK.

TRAGELAPHUS SCRIPTUS ORNATUS.

Tragelaphus scriptus ornatus, Pocock, Ann. Mag. Nat. Hist. ser. 7, vol. v. p. 94, 1900.

Size about as in the typical race, smaller than *delamerei* with shorter horns. General colour above reddish brown, darker below; six to eight indistinct transverse white bands on sides of body. Longitudinal white stripes absent, but spots below transverse bands tend to form a lower longitudinal stripe, but not a well-defined line as is found in the Senegal *scriptus*. A number of large white spots on haunches and three or four on shoulders. Face markings much as in *delamerei*, the white chevron mark in front of eyes may be either well defined or entirely absent. Short-haired collar and white chest band as in *delamerei*. A female specimen in the Museum Collection, shot by Selous at Linyanti, the type locality, has only three very indistinct white bands on the sides and not nearly so many white spots on the haunches as the adult males have.

Horn measurements (No. 19.7.15.399):—length on front curve $12\frac{1}{2}$; circumference $5\frac{1}{2}$; spread from tip to tip $6\frac{7}{8}$.

Typical locality, Linyanti, Chobe Valley, Bechuanaland. Range, Chobe and Zambesi valleys extending southwards into Mashonaland.

* Heller, Smithson. Misc. Collect. vol. lxi. no. 13, p. 1, 1913.

Selous in his account of the Bushbucks of South Africa * states as follows:—"In speaking of this antelope, I include all the Bushbucks that I have met with in different parts of the country, and which, although those found on the banks of the Chobe are very different at first sight, both as regards size and colour, from those met with in the Cape Colony, I believe to be all specifically identical.

"This Antelope is found everywhere in the belt of bush running all along the coast-line of the Cape Colony and Natal, and which in some places extends to a considerable distance inland. Along the Limpopo and some of its tributaries it is also found, but does not extend its range far up the latter. Then if we cross the water-shed between that river and the Zambesi, we again meet with it on the banks of the latter river and on the lower part of some of its tributaries, such as the Gwai and Sanyati. In certain districts along the southern bank of the Chobe it is more common than anywhere else. It is, however, never met with except in places where dense bush comes right down to the water's edge, and on the Chobe, where I have seen most of these Antelopes, I have never found one at a distance of 100 yards from the river. From the Cape Colony to the Chobe all the Bushbucks I have seen have a bare place round the neck, as if they had worn a broad collar, that had rubbed off all the long hair, leaving nothing but a soft velvety down. It is worthy of remark that the North-African Bushbuck (*Tragelaphus scriptus*) has not this bare place round the neck. In the Cape Colony the adult Bushbuck rams are of a deep dark brownish-black colour, with only two or three small white spots on the haunch and one or two on the shoulder. The adult females are of a light reddish brown, with white spots on the haunches, and sometimes a few between the shoulder and the flank. The young rams are of a reddish brown, more or less spotted. On the Limpopo the adult rams are of a brownish gray, often without a sign of any spots, and the adult females of a dark red, with a few white spots. The hair of the rams is longer than in the Colony . . . . .

"This is the Bushbuck which Gordon Cumming considered to be a new and undescribed species and named the '*Antelopus*

* Proc. Zool. Soc. 1881, p. 752.

roualeynei,' or 'Bushbuck of the Limpopo.' These Bushbucks are smaller than those found in the Cape Colony. . . . . If we now take the Bushbucks found on the banks of the Chobe, we find that the adult male is of a very dark red colour, in places merging into a deep brownish black, most beautifully spotted with large white spots, there being as many as fifty on each side in some individuals, and in some cases as many as eight well-defined white stripes besides. There is also a mane of white hair running all down the back from the shoulder to the tail, about 3 inches in length, and which the animal can erect at pleasure . . . . ."

The Cape Bushbuck described in the above is the animal now known as *Tragelaphus scriptus sylvaticus*.

371 —19.7.15.396. October, 1887. Lo Magondi's, Mashonaland, Southern Rhodesia.

372 —19.7.15.397. September, 1887. River Angwa, North Mashonaland, Southern Rhodesia.

373–374 —19.7.15.398–399. July, 1879. South bank of Chobe River.

CAPE BUSHBUCK.

Tragelaphus scriptus sylvaticus.

Antilope sylvatica, Sparrman, Act. Holm. 1780, p. 197, pl. vii.; Reisen Guten Hoffnung, p. 517, pl. iii., 1784; English Transl. (Voyage to Cape of Good Hope, etc.) vol. i. p. 270, vol. ii. p. 220, pl. vi., 1786; French Transl. vol. i. p. 293, pl. iii.

Tragelaphus sylvaticus, Blainville, Bull. Soc. Philom. 1816, p. 75.

Tragelaphus scriptus sylvaticus, Thomas, Proc. Zool. Soc. 1891, p. 389.

Size as in *ornatus*, horns longer. General colour darker, blackish brown above and without longitudinal or transverse white stripes on sides; a few small white spots on haunches and shoulders. Short-haired collar-band and face-markings as in the Chobe race.

Best horn measurements (No. 19.7.15.400):—length on front curve $15\frac{3}{4}$; circumference $5\frac{3}{8}$; spread from tip to tip $4\frac{1}{2}$.

Typical locality, Groot Vadersbosch district, Cape Colony; range includes Cape Colony, Orange River Colony, Transvaal, Natal, and parts of Portuguese East Africa.

This race is referred to by Selous in his paper published in the

Proceedings of the Zoological Society for 1881, an extract from which is quoted above.

375 —19. 7. 15. 400. April, 1896. Near East London, Cape Colony.
376–377 —19. 7. 15. 401–402. March, 1876. Near Algoa Bay, Cape Colony.

NYALA, OR INYALA.

TRAGELAPHUS ANGASI.

Tragelaphus angasi, Angas, Proc. Zool. Soc. 1848, p. 89, pls. iv. and v.
Euryceros angasi, Gray, Cat. Ruminants Brit. Mus. p. 48, 1872; Hand-list Ruminants Brit. Mus. p. 119, 1873.
Nyala angasi, Heller, Smithson. Misc. Collect. vol. lx. no. 8, p. 16, 1912.

Considerably larger than the Bushbucks; height at shoulder about 42 inches. Horns heavier and longer, good specimens measuring from 27 to 31½ inches in length. In the adult male a heavy dark fringe of long hairs extends from the throat down the neck on to the chest and belly. General colour greyish brown, dorsal crest white; about fourteen indistinct whitish bands on sides of body and a few faint white spots on haunches. Face markings of the Bushbuck pattern; suborbital chevron present, but incomplete. Lower part of legs bright buff, with white patches; dark blackish markings above hocks and knees. Female bright rufous in colour with dark dorsal crest and eleven well-defined transverse white bands on sides of body. Face with dark brown nasal marking. Mane, long fringe, and black marks on limbs absent.

Best horn measurements (No. 19. 7. 15. 405):—length on front curve 28⅝; in straight line from point to base 24; circumference 8; spread from tip to tip 10½.

Typical locality, St. Lucia Bay, Zululand, The range of the Nyala extends from Northern Natal through Mozambique and Nyasaland to Lake Mweru. In 1896 Selous made a special journey to Tongaland to obtain specimens of this rare antelope. In addition to the two heads and two pairs of horns mentioned below, he also obtained two entire specimens and presented them to the Museum, where they are now on exhibition. (B.M. Nos. 96. 11. 28. 9–10).

378–379 —19. 7. 15. 403–404. October, 1896. Usutu River, Tongaland, Natal.

380–381 —19. 7. 15. 405–406. Horns. September, 1896. Junction of Pongola and Usutu Rivers, Tongaland, Natal.

ZAMBESI SITATUNGA *.

Limnotragus selousi.

Tragelaphus spekei, Sclater, Proc. Zool. Soc. 1864, p. 103, pl. xii.; 1890, p. 590, pl. xlvii.

Tragelaphus selousi, Rothschild, Novit. Zool. vol. v. p. 206, 1898.

Limnotragus selousi, Sclater and Thomas, Book of Antelopes, vol. iv. p. 157, pl. xciv., 1900.

Distinguished from the Bushbucks and Nyala by the great elongation of the hoofs. Size almost equal to that of the Nyala. Horns from 30 to $35\frac{7}{8}$ inches in length. Ears smaller than in *Tragelaphus angasi*. Coat long and rather coarse. General colour dirty yellow-ochre, without the white body stripes of the Nyala †. Face markings somewhat similar, a large incomplete white suborbital chevron and an indistinct white spot below eyes. This species is easily distinguished from the other members of the genus *Limnotragus* by the fact that the two sexes are alike in general colour, whereas in *spekei* from the Victoria Nyanza and *spekei gratus* from the Gabun the sexes are of different colours.

Best horn measurements (No. 19. 7. 15. 409):—length on front curve $32\frac{3}{8}$; in straight line from point to base 27; circumference $7\frac{3}{8}$; spread from tip to tip $16\frac{3}{8}$.

Typical locality, Zambesi Valley; range, Zambesi Valley and northwards through Northern Rhodesia into the southern part of the Belgian Congo.

382 —19. 7. 15. 407. 5 August, 1879. Lower Chobe River, near Linyanti.

383 —19. 7. 15. 408. Horns. Killed by natives in swamps of Chobe River, near Linyanti (August, 1879).

384 —19. 7. 15. 409. Horns. Killed by Leopard in swamps of Chobe River (August, 1879).

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* Also spelt "Situtunga."

† Selous records (Proc. Zool. Soc. 1881, p. 753) having seen a fœtal specimen in 1877, and states that it was striped and spotted like the Chobe Bushbucks.

EAST AFRICAN LESSER KUDU.

Strepsiceros imberbis australis.

Ammelaphus imberbis australis, Heller, Smithson. Misc. Collect. vol. lxi. no. 13, p. 2, 1913.

Strepsiceros imberbis australis, Lydekker and Blaine, Cat. Ungulate Mamm. Brit. Mus. vol. iii. p. 195, 1914.

Closely allied to the Somaliland Lesser Kudu. Size about as in the Nyala. Horns easily distinguished from those of the Bushbucks, Nyala, and Sitatunga by the greater development of the spiral twist, there being at least two-and-a-half turns; distinctly ridged and rather smaller than in the typical race. Ears large; throat fringe absent. General colour darker than in the Somaliland form, twelve or thirteen white transverse stripes on sides of body, extending from median dorsal stripe to underparts. Face markings much as in *Tragelaphus*; well-defined white gorget on throat and another on chest.

Horn measurements (No. 19. 7. 15. 411):—length on curve $27\frac{1}{2}$; in straight line from point to base $22\frac{1}{4}$; circumference $6\frac{1}{2}$; spread from tip to tip $13\frac{1}{4}$.

Typical locality, Longaya watering-place, Marsabit district, Jubaland Province, Kenya Colony; range apparently extensive, from Southern Abyssinia in the north through the Lake Rudolf district and Jubaland Province southwards across the Northern Guaso Nyiro into the Tanaland and Seyidie Provinces, extending westwards, north of Kilimanjaro, to the Rift Valley and from thence south into Tanganyika Territory.

385 —19. 7. 15. 410. 12 March, 1912. Lower Guaso Nyiro, Kenya Colony.

386 —19. 7. 15. 411. 13 March, 1912. Lower Guaso Nyiro, Kenya Colony.

387 —19. 7. 15. 412. 19 March, 1912. Lower Guaso Nyiro, Kenya Colony.

KUDU.

Strepsiceros strepsiceros strepsiceros.

Antilope strepsiceros, Pallas, Misc. Zool. p. 9, 1766; Spicil. Zool. fasc. i. p. 17, 1767; fasc. xii. pp. 19 and 69, 1777.

Damalis strepsiceros, H. Smith, Griffith's Animal Kingdom, vol. iv. p. 359, 1827.

Damalis (*Strepsiceros*) *strepsiceros*, H. Smith, op. cit. vol. v. p. 365, 1827.
Strepsiceros strepsiceros, Smuts, Enum. Mamm. Cap. p. 92, 1832.
Strepsiceros strepsiceros strepsiceros, Pocock, Proc. Zool. Soc. 1905, vol. i. pp. 140, 141.

Size very large, height at shoulder 50 to 52 inches. Differs from the Lesser Kudu in having a well-developed fringe on throat and chest, and much larger horns, in good specimens from 55 to 64 inches along curve. General colour of body greyish brown, sometimes bluish grey or tinted with rufous; nine or ten transverse white stripes on side of body. In the East African and Sudan races the body stripes are less numerous.

The Collection contains a very fine series of this handsome Antilope. No. 19.7.15.417 has the best horns:—length on curve $60\frac{5}{8}$; in straight line from point to base $45\frac{3}{8}$; circumference $11\frac{1}{2}$; spread from tip to tip 33. Another good head is No. 19.7.15.420, which has the following horn measurements:—length on curve $63\frac{3}{8}$; in straight line from point to base 41; circumference 10; spread from tip to tip $23\frac{1}{4}$. The spread of the horns is very variable; the maximum tip to tip interval in this series occurs in No. 19.7.15.426, being as much as 43 inches. The minimum spread from tip to tip is 16 inches (No. 19.7.15.428). The female head (No. 19.7.15.419) is a very exceptional specimen as it possesses well-developed horns, one of which measures as much as $30\frac{1}{4}$ inches from point to base. Selous* writing in his diary of this specimen makes the following statement:—"I rode on to the carcase of this Koodoo cow just after it had been killed by wild dogs, which I drove off, when near Bamangwato in Khama's country in March, 1888. Altogether I have seen many hundreds of female Koodoos, but this is the only one I ever saw with horns."

Typical locality, Cape Colony; range extends northwards across Zambesi into Northern Rhodesia. Writing in 1881† on the distribution of the Kudu in South Africa, Selous makes the following remarks:—"A few Koodoos still linger in the Cape Colony, and in parts of Griqualand West they are not uncommon.

* Cat. Exhibits Brit. Section International Shooting and Field Sports Exhibit. Vienna, 1910, p. 17, 1911.

† Proc. Zool. Soc. 1881, p. 751.

From the Limpopo to the Zambesi, however, and in the Manica country to the north of the Zambesi, it is found in the neighbourhood of every river I have visited except in those places where the natives have exterminated it. It is usually partial to hilly country covered with dense thickets; but hills are by no means necessary to its existence, as it is common in the thick bush along both banks of the river Chobe, where there are no hills whatever, and it is also plentiful in the wait-a-bit thorn-jungle on the lower Molapo, just on the edge of the flat and sandy Kalahari Desert . . . . . ."

388 —19.7.15.413. 22 July, 1882. Near Hanyani River, Mashonaland, Southern Rhodesia.

389–390 —19.7.15.414–15. October, 1880. Near Hanyani River, Mashonaland, Southern Rhodesia.

391 —19.7.15.416. May, 1890. Lower Macloutsi River, Khama's Country.

392–393 —19.7.15.417–418. May, 1890. Near Lower Macloutsi River, Khama's Country.

394 —19.7.15.419 (female). March, 1888. Bamangwato, Khama's Country.

395 —19.7.15.420. 1 September, 1880. Near Umfuli River, Mashonaland, Southern Rhodesia.

396 —19.7.15.421. 1 July, 1874. Near Victoria Falls, Zambesi.

397 —19.7.15.422. Skull and horns. June, 1890. Near Lower Macloutsi River, Khama's Country.

398 —19.7.15.423. Skull and horns. 1886. Near Mahalapsi River, Khama's Country.

399 —19.7.15.424. Horns. June, 1890. Shashi River, Western Matabililand, Southern Rhodesia.

400 —19.7.15.425. Horns. November, 1886. Near Limpopo River.

401 —19.7.15.426. Horns. November, 1886. Upper Limpopo River.

402 —19.7.15.427. Horns. January, 1889. Notwani River, Khama's Country.

403 —19.7.15.428. Horns. 1887. Near Batlanarma, Khama's Country.

404 —19.7.15.429. Horns. November, 1884. Upper Tati River, Tati District, Southern Rhodesia.

405 —19.7.15.430. Horns. 1887. Near junction of Notwani and Limpopo Rivers.

MASHONALAND ELAND.

Taurotragus oryx selousi.

Oreas canna, Selous, A Hunter's Wanderings in S. Africa, pl. i. figs. 1 and 3, 1881.

Taurotragus oryx selousi, Lydekker, Ward's Records of Big Game, ed. 6, p. 328, 1910; ed. 7, p. 330, 1914.

Elands are characterised by their very large size and the presence of horns in both sexes, those of the females longer and more slender than in the males; horns with a large keel, and in the form of a screw-like spiral. The Mashonaland Eland is closely allied to the typical race, *Taurotragus oryx oryx*, distinguished by the presence of a number of light body-stripes, which are well-defined in immature specimens, but tend to become very indistinct in old age. In young and sub-adult specimens a white suborbital streak is present; in old males this marking disappears, the whole forehead and upper part of nose being covered by a dense tuft-like growth of brown hair.

The male head with the best horns is No. 19. 7. 15. 434:—length from point to base $31\frac{1}{2}$; circumference 13; spread from tip to tip 12. A considerable amount of variation is found in the spread of the horns of this antelope; in one specimen (No. 19. 7. 15. 439) the tip to tip interval is as much as $20\frac{1}{2}$ inches. The largest female horns (No. 19. 7. 15. 437) measure as follows:—length from point to base 32; circumference $8\frac{1}{4}$; spread from tip to tip $20\frac{3}{5}$.

Typical locality, Umfuli River, Mashonaland, Southern Rhodesia. Selous *, writing in 1881 on the distribution of the South African Elands, states as follows:—"The Eland is now extinct in the Cape Colony, Natal, the Orange Free State, Griqualand West, and the Transvaal, and almost so in all the countries watered by the tributaries of the Limpopo, to the west of the Matabele country. In the Kalahari Desert to the west of Secheli's and Bamangwato it is plentiful, but never now comes as far eastward as the waggon-road between the two places. North of Bamangwato, along the roads leading to the Lake Ngami, and to the Victoria Falls of the Zambesi, there are always a few Elands to

* Proc. Zool. Soc. 1881, p. 749.

be found, though they are usually very scarce. . . . . In all the country between the Botletlie and Chobe rivers, Elands are still to be found in greater or lesser numbers, and I have often seen herds of over a hundred together. In the dry desert country through which the Chobe runs they are particularly plentiful. . . . . Between the Chobe and Zambesi rivers I found Elands plentiful, and so far as I went to the north of the Zambesi I also found them. . . "

The characters that have been used to distinguish the various races or so-called races of South African Eland are very unsatisfactory, and it seems highly probable that in this area only two forms can be recognized—(1) the extinct Cape Eland, the typical race; and (2) the Zambesi or Mashonaland race. If such be the case the present form would have to be called *livingstonei*, a name bestowed by Sclater on the Zambesi Eland in 1864*, and the names *selousi*, *niediecki*, and *kaufmanni* would become synonymous. The absence of the white suborbital marking and extreme development of the dark frontal tuft are signs of old age; the shape and extent of these white suborbital markings and frontal tufts are obviously characters associated with sex and age, and cannot be used for systematic diagnosis. The same is true of the almost complete disappearance of some of the white body-stripes, which in old age appear to get very indistinct, although never entirely absent as they are in both the young and adult of the typical race from the Cape.

In this connection it is of interest to see what Selous' view was in 1881 when he wrote the paper for the Zoological Society quoted above.

"The skins of Elands that I have seen from the Kalahari desert have no signs of a stripe upon them, and the dark mark above the knee on the inside of the fore leg is either very faint or altogether wanting. In April 1879 I shot several Eland cows about sixty miles north of Bamangwato, on the road to Lake Ngami. I looked at all of them very carefully, but could not detect the faintest sign of a stripe, though some of them had the patches on the inside of the fore legs of a light gray colour. During the

* *Oreas livingstonii*, Sclater, Proc. Zool. Soc. 1864, p. 105.
Taurotragus oryx livingstonei, Selous, Great and Small Game of Africa, p. 421, 1899.

following months I shot many Elands on the eastern bank of the Botletlie river, on the Mābābe, and on both sides of the Chobe river. Every one of these Elands was more or less striped, some so faintly as to be barely perceptible, some very plainly. In the Mashuna country, again, to the north-east of the Matabele country, every Eland cow is very plainly striped, many of them having the stripes quite as plain as they are on a Koodoo, and the patches on the inside of the fore legs of a deep black. The one Eland (a cow) which I shot to the north of the Zambesi was beautifully marked, having nine broad white stripes on each side, and a broad black line down the centre of the back. Elands that are much striped often have a whitish mark across the nose, in the same place as in the Koodoo.

"Old Eland bulls have very little hair on their skins, and look a dark slaty-blue colour, owing to the colour of the skin showing through the scanty hair, and on these old animals, naturally enough, no sign of stripes can be perceived. Old cows also turn to a slate colour from the same cause. In every large herd of Elands, cows are to be seen of every shade of colour from pale fawn to bluish gray. Therefore your old hunter, who knows of four species of Lions, and six or seven Rhinoceroses, says that there are two or three distinct species of Elands, the blue, the yellow, and the striped. . . . . "

406 —19. 7.15.431. 5 November, 1878. Umfuli River, Mashonaland, Southern Rhodesia. Cotype.

407 —19. 7. 15. 432. 5 October, 1880. Umfuli River, Mashonaland, Southern Rhodesia. Cotype.

408 —19. 7. 15. 433 (female). 3 September, 1874. South bank of Chobe River, North Bechuanaland.

409 —19. 7. 15. 434. September, 1885. Near Hanyani River, Mashonaland, Southern Rhodesia.

410 —19. 7. 15. 435 (female). September, 1885. Near Hanyani River, Mashonaland, Southern Rhodesia.

411 —19. 7. 15. 436 (female). 6 August, 1883. Near Hanyani River, Mashonaland, Southern Rhodesia.

412 —19. 7. 15. 437 (female). August, 1885. Near Hanyani River, Mashonaland, Southern Rhodesia.

413 —19. 7. 15. 438. September, 1885. Near Mount Hampden, Mashonaland, Southern Rhodesia.

414 —19. 7. 15. 439. October, 1885. Near Upper Hanyani River, Mashonaland, Southern Rhodesia.

EAST AFRICAN ELAND.

TAUROTRAGUS ORYX PATTERSONIANUS.

Taurotragus oryx pattersonianus, Lydekker, Field, vol. cviii. p. 579, 1906; Novit. Zool. vol. xiv. p. 325, pl. i., 1907.

Very closely allied to the foregoing race; general colour rather darker, with a darker mane. As in the case of the Mashonaland race the white suborbital markings are only present in animals not very advanced in age, and similarly the gradual increase of size of the frontal tuft from a dark central streak to a broad long-haired growth is also a change brought about by age.

The only specimen of this Eland in the Collection is a bull with horns measuring as follows:—length from point to base 24; circumference $10\frac{3}{4}$; spread from tip to tip $10\frac{1}{2}$.

Typical locality, Laikipia Plateau, Naivasha Province, Kenya Colony; range includes the greater part of Kenya Colony, the race extending as far north as the Northern Guaso Nyiro Valley, and penetrating northwards from the typical locality into Uganda. It also occurs in Tanganyika Territory and further south probably merges with the Mashonaland form.

415 —19. 7. 15. 440. Sirgoit Hills, Uasin Gishu District, Kenya Colony.

SUDAN DERBY ELAND.

TAUROTRAGUS DERBIANUS GIGAS.

Taurotragus (*Boselaphus*) *oreas*, Heuglin, Nova Acta Ac. Cæs. Leop.-Car. vol. xxx. p. 19, 1863; Reise Weiss. Nil, p. 319, 1869, nec *Antilope oreas*, Pallas.

Taurotragus (*Boselaphus*) *gigas*, Heuglin, Nova Acta Ac. Cæs. Leop.-Car. vol. xxx. p. 19, pl. i. fig. 2, 1863; Reise Weiss. Nil, p. 318, 1869.

Taurotragus gigas, Baker, Wild Beasts and their Ways, vol. ii. p. 189, 1890.

Taurotragus oryx gigas, Sclater and Thomas, Book of Antelopes, vol. iv. p. 198, 1900.

Taurotragus derbianus gigas, Rothschild, Novit. Zool. vol. xii. p. 447, pl. xii., 1905; Ann. Mag. Nat. Hist. ser. 8, vol. xii. p. 575, 1913.

Closely allied to the typical form from West Africa, distinguished by the adult males being lighter in colour and having

considerably less dark hair on neck and throat. The Giant or Derby Elands are quite distinct from *Taurotragus oryx*, having larger horns, and much broader ears, with black band on inner side of hind margins. General colour richer, forehead in females chestnut-red; in old bulls a tuft-like growth of darker hair develops. White suborbital markings distinct, in the form of two narrow white streaks, separated by a dark brown nose-stripe. White spots on sides of face and white bar across lower throat, which is fringed with a narrow mane of dark brown hairs.

The only specimen of this Eland in the Collection is a female, the horns of which measure as follows:—length from point to base $28\frac{1}{4}$; circumference $8\frac{3}{4}$; spread from tip to tip $13\frac{1}{4}$. In subadult specimens the horns are usually longer, as in old age the horns get worn down very considerably. The record horn-length from point to base is 41 inches.

Typical locality west of the White Nile, Bahr-el-Ghazal Province, in about 7° N. lat.; the race appears to be confined to the Bahr-el-Ghazal and Lado Provinces, Sudan.

416 —19. 7. 15. 441 (female). Near Wau, Bahr-el-Ghazal Province, Sudan.

Family GIRAFFIDÆ.

RETICULATED GIRAFFE.

Giraffa reticulata.

Giraffa camelopardalis reticulata, de Winton, Ann. Mag. Nat. Hist. ser. 7, vol. iv. p. 211, 1899.

Giraffa reticulata, Thomas, Proc. Zool. Soc. 1901, vol. ii. p. 476.

Size rather less than in the other East African Giraffes. Distinguished from *camelopardalis* by the general colour pattern, the body being reddish brown with a white network superimposed, the dark body-colour thus being cut up into a number of large reddish-brown rectangular patches. On the head the reticulations are considerably smaller and are continued forwards over the cheeks as far as the chin. Anterior horn large and very stout.

Typical locality, Lorogai Mts., north of Laikipia District;

range from the north bank of the Tana River and northern slopes of Mt. Kenya, northwards across the Northern Guaso Nyiro towards Southern Abyssinia, and as far west as Lake Rudolf.

This Giraffe was originally described as a race of *camelopardalis*; owing to its very distinct colour pattern it appears worthy of full specific rank. It is, however, quite possible that when more is known concerning the East African Giraffes it may be found that *reticulata* grades into the Uganda Giraffe (*G. camelopardalis rothschildi*) to the west of the Laikipia District and Lake Rudolf, and into the Masai race (*G. camelopardalis tippelskirchi*) south of the Tana River.

417 —19. 7. 15. 444. 1912. Northern Guaso Nyiro Valley, Kenya Colony.

UGANDA GIRAFFE.

Giraffa camelopardalis rothschildi.

"*Five-horned Giraffe*," Thomas, Proc. Zool. Soc. 1901, vol. ii. p. 474.

"*Giraffe*," Ridewood, Proc. Zool. Soc. 1904, vol. i. p. 151, figs. 4, 8, and 9.

Giraffa camelopardalis rothschildi, Lydekker, Hutchinson's Animal Life, vol. ii. p. 122, 1903; Proc. Zool. Soc. 1904, vol. i. p. 210; 1905, vol. i. p. 121; Game Animals of Africa, p. 358, 1908.

Size larger than in *reticulata*; anterior horn well-developed. Ground colour yellowish buff or brownish buff, showing through as a coarse network between the large blackish-brown blotches, which are sometimes rectangular and other times very irregular in shape. Dark blotches smaller on the neck and quite small on head, the ground colour of which is occasionally considerably lighter than that of the neck or body. A female specimen in the Museum has the dark blotches chestnut-buff in colour, with hardly any black suffusion.

Typical locality, Uasin Gishu Plateau, Kenya Celony; the range extends westwards into Uganda and northwards from Lake Baringo towards Lake Rudolf.

418 —19. 7. 15. 445. 1909. Uasin Gishu Plateau, Kenya Colony.

SOUTH AFRICAN GIRAFFE.

Giraffa camelopardalis capensis.

Camelopardalis australis, Swainson, Geogr. and Classif. Anim. p. 95, 1835.
Camelopardalis capensis, E. Geoffroy (?), *teste* Gray; Ogilby, Proc. Zool. Soc. 1836, p. 134, nom. nudum; Lesson, Nouv. Tabl. Règne Anim. p. 168, 1842, ex Le Vaillant, Voyage Intér. Afrique, pls. viii. and ix., 1790.
Giraffa capensis, de Winton, Proc. Zool. Soc. 1897, p. 277.
Giraffa camelopardalis capensis, Major, Proc. Zool. Soc. 1902, vol. ii. p. 77.

Size equal to that of *rothschildi*. Anterior horn reduced to an inconspicuous lump. Colour pattern much the same, ground colour dirty buff, and blotches dark brown, rather more indistinct than in *rothschildi*; shanks deep tawny and spotted to hoofs. In *rothschildi* the spots on the legs do not extend beyond the hocks and knees, and the ground colour of the shanks is almost white.

Typical locality, South Africa, north of the Orange River. Selous * gives the following information on the distribution of this Giraffe in the year 1881:—"This animal, though its range has been sadly reduced since the days of Gordon Cumming, is nevertheless still to be found in considerable numbers over a vast extent of country to the south of the Zambesi river. In parts of the Kalahari desert it is said to abound, and in all the dry sandy district between Bamangwato and Lake Ngami, and thence to the Mābābe, Chobe, and Zambesi rivers, it is also very numerous. Along portions of the Botletlie river, and in the waterless but forest-clad sand-belts on the southern bank of the Chobe, it is particularly plentiful. In the country between the Chobe and the Zambesi, the Giraffe is also found, in the neighbourhood of Linyanti; but it is not nearly so numerous there as on the other side of the former river. Immediately north of the Zambesi it is unknown, though it appears to be plentiful in parts of Central and Eastern Africa. In some parts of the Matabele country it is also common, but until the last few years was never found eastwards of the river Gwelo, though it was always very plentiful in the sand-belts to the westward of that river . . . . . ."

* A Hunter's Wanderings in Africa, p. 230, 1881.

The South African Giraffe is still to be found in the Northern Kalahari and parts of ex-German South-West Africa.

419 19. 7. 15. 446. December, 1880. Near Tati River, Tati District, Southern Rhodesia.

Family **SUIDÆ.**

NATAL WART-HOG.

PHACOCHŒRUS ÆTHIOPICUS SUNDEVALLI.

Phacochœrus sundevalli, Lönnberg, Sjöstedt's Kilimandjaro-Meru Exped., Mamm. p. 54, 1908; Proc. Zool. Soc. 1908, p. 937.
Phacochœrus æthiopicus sundevalli, Lydekker, Game Animals of Africa, Suppl. p. 23, 1911.

Distinguished from the typical race by the skull being narrower and more elongated in the postorbital region, and with the interorbital constriction more marked.

Typical locality, Natal. This race would appear to inhabit the country from Natal northwards to Southern Rhodesia.

420 —19. 7. 15. 500. September, 1887. Near Hanyani River, Mashonaland, Southern Rhodesia.

MASAI WART-HOG.

PHACOCHŒRUS ÆTHIOPICUS MASSAICUS.

Phacochœrus massaicus, Lönnberg, Sjöstedt's Kilimandjaro-Meru Exped., Mamm. p. 54, 1908; Proc. Zool. Soc. 1908, p. 937.
Phacochœrus æthiopicus massaicus, Lydekker, Game Animals of Africa, Suppl. p. 23, 1911.

In this race the postorbital region is not exceptionally narrow or elongated and the interorbital width relatively great.

Type locality, Kilimanjaro-Meru District.

421–423 —19. 7. 15. 501–503. Uasin Gishu Plateau, Kenya Colony.

Family **HIPPOPOTAMIDÆ.**

HIPPOPOTAMUS.

Hippopotamus amphibius amphibius.

Hippopotamus amphibius, Linn. Syst. Nat. ed. 10, vol. i. p. 74, 1758; ed. 12, vol. i. p. 101, 1766.

Hippopotamus amphibius amphibius, Schwarz, Ann. Mag. Nat. Hist. ser. 8, vol. xiii. p. 31, 1914.

Represented in the Collection by a single skull which is provisionally referred to the typical race. The cranial characters that have been used in differentiating the various races of Hippopotamus are such as can only be relied upon if supported by evidence from large series of specimens; the material in the Museum Collection is not sufficient to permit of any definite decision being made.

Typical locality, Nile Valley.

424 —19. 7. 15. 504. Skull. Lower Ruenya River, 20 miles south of Tette, Mozambique.

Family **EQUIDÆ.**

GREVY'S ZEBRA.

Equus (Dolichohippus) grevyi.

Equus grevyi, Oustalet, La Nature, vol. x. p. 12, figs. 1 and 2, 1882.

Dolichohippus grevyi, Heller, Smithson. Misc. Collect. vol. lx. no. 8, p. 1, 1912.

Equus (Dolichohippus) grevyi, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 17, 1916.

Distinguished from all the other Zebras by its much larger head, the skull being elongated with a long diastema between the cheek-teeth and incisors, and the greater size of the ears. Body coloration consists of a series of brownish black and buff or whitish stripes of almost equal width except on the neck where the dark stripes become broader. The stripes of the body are all transverse, even those on the rump.

Typical locality, Abyssinia; range extends from north bank of the Tana River northwards across the Northern Guaso Nyiro as

far north as Lake Zwai in Abyssinia. In the West it reaches the eastern shores of Lake Rudolf, and in the East penetrates into Somaliland. The Somaliland Grévy Zebra has been described as a distinct race by Pocock * on account of the rather paler coloration.

425–426 —19. 7. 15. 505–506. 1912. Northern Guaso Nyiro, Kenya Colony.

CUNINGHAME'S ZEBRA.

EQUUS QUAGGA CUNINGHAMEI.

Equus quagga cuninghamei, Heller, Smithson. Misc. Collect. vol. lxi. no. 22, p. 3, 1914.

Distinguished from *grevyi* by its smaller head and less elongated skull. Ears smaller and narrower. Dark stripes on body wider than light ones; the stripes on rump diagonal, not transverse. The general ground colour is darker than in the following race, ochraceous buff rather than cream coloured, and the dark stripes are a trifle paler.

Typical locality, Northern Guaso Nyiro Valley, Kenya Colony, ranging from the north bank of the Tana River northwards across the Northern Guaso Nyiro towards Lake Rudolf.

427–428 —19. 7. 15. 507–508. 1912. Northern Guaso Nyiro, Kenya Colony.

MASAI ZEBRA.

EQUUS QUAGGA GRANTI.

Equus burchelli granti, de Winton, Ann. Mag. Nat. Hist. ser. 6, vol. xvii. p. 319, 1896.

Equus quagga granti, Pocock, Ann. Mag. Nat. Hist. ser. 7, vol. x. p. 306. 1902; vol. xiv. p. 315, 1904.

Closely related to *cuninghamei*, differing in the general ground colour being whiter and the dark stripes darker.

Typical locality, Thika-Thika Valley, upper Tana Valley, Kenya Colony; range from Southern Abyssinia southwards through

* *Equus grevyi berberensis*, Pocock, Ann. Mag. Nat. Hist. ser. 7, vol. x. p. 308, 1902.

Uganda, Kenya Colony (excluding the Northern Guaso Nyiro district, Tanaland and Seyidie Provinces) to Tanganyika Territory.

429 —19.7.15.509. 26 December, 1902. Elmenteita Station, Naivasha District, Kenya Colony.

430 —19.7.15.510 (female). 26 December, 1902. Elmenteita Station, Naivasha District, Kenya Colony.

Family **RHINOCEROTIDÆ.**

TYPICAL BLACK RHINOCEROS.

Rhinoceros (Diceros) bicornis bicornis.

Rhinoceros bicornis, Linn. Syst. Nat. ed. 10, vol. i. p. 56, 1758; ed. 12, vol. i. p. 104, 1766.

Diceros bicornis, Gray, Med. Repository, vol. xv. p. 306, 1821.

Rhinoceros (*Diceros*) *bicornis*, Ward, Records of Big Game, ed. 6, p. 467, 1910, ed. 7, p. 466, 1914; Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 52, 1916.

Rhinoceros bicornis bicornis, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 54, 1916.

In size very little inferior to the White or Square-mouthed Rhinoceros, distinguished by the shorter head, the skull being considerably shorter and not elongated posteriorly beyond condyles; seven cheek-teeth on each side, the first premolar remaining throughout life. Front horn with rounded base. Upper lip pointed and hook-shaped. The prominent hump on the neck, so characteristic a feature of *simus*, is absent. The typical race is very like the Somali form, size rather larger, and with skull slightly more concave dorsally.

Typical locality, Cape Colony. The range at one time extended from the Cape northwards to Uganda; at the present time the Black Rhinoceros is quite extinct in Cape Colony and is only found in a few localities south of the Zambesi. In East Africa this race is not found in the desert regions of the Northern Guaso Nyiro or east of the Tana River, where its place is taken by the Somali form. It appears that the Black Rhinoceros was exterminated in Cape Colony and the Orange River Colony by the year 1853.

Selous * gives the following account of the distribution of this Rhinoceros during the period 1872 to 1881. ". . . I now come to the Prehensile-lipped Rhinoceros (*R. bicornis*), of which I maintain there is but one true species, in spite of whatever may be said by old Dutch hunters or natives to the contrary. This animal is still fairly numerous in many districts of South-Eastern Africa, although, like its congener, the Square-mouthed Rhinoceros, it has been almost exterminated in the more westerly portions of the country. In 1879 there were still two or three drinking in the Upper Chobe, to the north-west of the Sunta outlet. Between the Chobe and the Zambesi there are none, and according to the natives there never were any there, even when the Makololo first came into the country; but directly the Zambesi has been crossed they are again found, and extend apparently through all Central Africa right up to Abyssinia. The Prehensile-lipped Rhinoceros lives exclusively upon bush and roots, eating not only the young leaves as they sprout from the end of a twig, but also chewing up a good deal of the twig itself. It is owing to the fact that this species lives upon bush that its range is very much more extended than that of the Square-mouthed Rhinoceros; for there are many large districts of country in the neighbourhood of the Zambesi to the eastward of the Victoria Falls covered almost entirely with an endless succession of rugged hills, almost devoid of grass, though well wooded, in all of which districts the Prehensile-lipped Rhinoceros is numerous, as it thrives well upon the scrubby bush with which the hill-sides and valleys are covered; whereas the square-mouthed species, though common in the forest-clad sand-belts and broad grassy valleys which always skirt the hills, is seldom or never found amongst the hills themselves, which is doubtless because the pasturage is too scanty to enable them to exist. . . ."

It was in the same paper that Selous very clearly showed that *Rhinoceros keitloa* † was simply a variety of *bicornis*.

431 —19. 7. 15. 511. Skull and norns. August, 1883. Umsengaisi River, Mashonaland, Southern Rhodesia. Length of front horn on outside curve 21¾; circumference at base 19¾; length of rear horn on side 12; circumference at base 19.

* Proc. Zool. Soc. 1881, p. 728.

† A. Smith, Cat. Mamm. S. African Mus. p. 7, 1837.

432 —19. 7. 15. 512 (female). Horns. November, 1885. Umfuli River, Mashonaland, Southern Rhodesia. Length of front horn on outside curve 15½; circumference at base 18; length of rear horn on side 17¾; circumference at base 19.

433 —19. 7. 15. 513 (female). Horns. September, 1885. Hanyani River, Mashonaland, Southern Rhodesia. Length of front horn on outside curve 20; circumference at base 18⅛; length of rear horn on side 15¾; circumference at base 16½.

434 —19. 7. 15. 514. Horns. August, 1874. South bank of Chobe River. Length of front horn on outside curve 24; circumference at base 19; length of rear horn on side 16¾; circumference at base 22.

435 —19. 7. 15. 515 (female). Horns. September, 1873. Junction of Gwai and Tchangani Rivers, Matabililand, Southern Rhodesia. Length of front horn on outside curve 22½; circumference at base 17½; length of rear horn on side 12; circumference at base 18.

436 —19. 7. 15. 516. Horns. November, 1874. Thamma Setsi, between Tati and Victoria Falls. Length of front horn on outside curve 21; circumference at base 17½; length of rear horn on side 8¾; circumference at base 17.

437 —19. 7. 15. 517 (female). Horns. September, 1880. Between Umfuli and Umzweswi Rivers, Mashonaland, Southern Rhodesia. Length of front horn on outside curve 28; circumference at base 18; length of rear horn on side 8¾; circumference at base 18½.

438 —19. 7. 15. 518. Horn. 1873. Matabililand, Southern Rhodesia. Length on front curve 30¾; circumference at base 16.

SOMALI BLACK RHINOCEROS.

Rhinoceros (Diceros) bicornis somaliensis.

Rhinoceros bicornis somaliensis, Potocki. Sport in Somaliland, p. 82, 1900; Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 55, 1916.

Diceros bicornis somaliensis, Allen, Bull. Amer. Mus. Nat. Hist. vol. xxxiii. p. 340, 1914.

Rhinoceros (*Diceros*) *bicornis*, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 52, 1916.

Rather smaller than the typical race, with dorsal outline of skull less concave. General colour of body lighter; tips of ears not so heavily fringed. Horns about the same; the record horn measures 29½ inches in length.

Typical locality, Somaliland; range extends westward as far as the Tana River and valley of the Northern Guaso Nyiro. To the north of the Northern Guaso Nyiro this Rhinoceros inhabits the area to the east of Lake Rudolf; it is also found in certain parts of Southern Abyssinia.

439 —19.7.15.519. 1912 (sex not recorded). Northern Guaso Nyiro, Kenya Colony. Length of front horn on outside curve 24½; circumference at base 17; length of rear horn on side 22½; circumference at base 17¼.

440 —19.7.15.520 (sex not recorded). Horns. 1912. Northern Guaso Nyiro, Kenya Colony. Length of front horn on outside curve 21; circumference at base 16; length of rear horn on side 14; circumference at base 16¾.

SOUTH AFRICAN WHITE, OR SQUARE-MOUTHED RHINOCEROS.

Rhinoceros (Diceros) simus simus.

Rhinoceros simus, Burchell, Bull. Soc. Philom. 1817, p. 97; Travels in S. Africa, vol. ii. p. 75, 1824.

Ceratotherium simum, Gray, Proc. Zool. Soc. 1867, p. 1027; Cat. Carnivora, etc., Brit. Mus. p. 319, 1869; Hand-List Thick-skinned Mamm. Brit. Mus. p. 52, 1873.

Diceros simus, Thomas, Nature, vol. lxii. p. 599, 1900; Proc. Zool. Soc. 1901, vol. ii. p. 158.

Rhinoceros (*Diceros*) *simus*, Ward, Records of Big Game, ed. 6, p. 473, 1910, ed. 7, p. 472, 1914; Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 55, 1916.

Rhinoceros simus simus, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. v. p. 56, 1916.

Size rather larger than in *bicornis* with much larger head; skull very long with posterior part prolonged backward well beyond the condyles. First premolar not persistent, the adult number of cheek-teeth being seven. Front horn with square base. Upper lip broad and square. Prominent fleshy hump on nape of neck. Ears considerably larger than in *bicornis*. General colour rather lighter than in the Black species. The typical White Rhinoceros of South Africa is very closely allied to the Nile race

from Lado; the latter form differs in having a flatter skull and smaller teeth. The longest horn on record of the South African race is 62½ inches in length.

Typical locality, Cape Colony; range formerly extended over the greater part of Africa south of the Zambesi. As a wild animal the South African White Rhinoceros is now extinct, a few still survive in a semi-wild state under Government protection.

Writing in the year 1881 concerning the White Rhinoceros Selous states as follows*:—"... Twenty years ago this animal seems to have been very plentiful in the western half of Southern Africa; now, unless it is still to be found between the Okavango and Cunene rivers, it must be almost extinct in that portion of the country. And this is not to be wondered at, when one reads the accounts in Andersson's and Chapman's books of their shooting as many as eight of these animals in one night, as they were drinking at a small water-hole; for it must be remembered that these isolated water-holes, at the end of the dry season, represented all the water to be found over an enormous extent of country, and that therefore all the rhinoceroses that in happier times were distributed over many hundreds of square miles were in times of drought dependent upon perhaps a single pool for their supply of water. In 1877, during several months' hunting in the country to the south of Linyanti, on the river Chobe, I only saw the spoor of two Square-mouthed Rhinoceroses, though in 1874 I had found them fairly plentiful in the same district; whilst in 1879, during eight months spent in hunting on and between the Botletlie, Mābābe, Machabe, Sunta, and Upper Chobe rivers, I never saw the spoor of one of these animals, and all the Bushmen I met with said they were finished. In 1878 and 1880, however, I still found them fairly numerous in a small tract of country in North-eastern Mashuna Land, between the Umniati and Hanyane rivers. Their range, however, is rather limited towards the north, as they only inhabit the country lying to the south of the belt of rough stony hills which in this district extend for more than a hundred miles southwards from the banks of the Zambesi river. Their extermination in this portion of the country may therefore, I am afraid,

* Proc. Zool. Soc. 1881, p. 725.

be expected within a very few years; and the Square-mouthed Rhinoceros will then only exist in a few small tracts of S.E. Africa, in the neighbourhood of the river Sabi."

441 —19. 7. 15. 521 (female). Horns. June, 1874. Thamma Setsi, between Tati and Victoria Falls. Length of front horn on outside curve 33; circumference at base $23\frac{1}{4}$; length of rear horn on side $13\frac{1}{2}$; circumference at base 20.

442 —19. 7. 15. 522. Skull and horns. June, 1880. Between Umniati and Umzweswi Rivers, Mashonaland, Southern Rhodesia. Length of front horn on outside curve $37\frac{3}{8}$; circumference at base $27\frac{1}{8}$; length of rear horn on side $17\frac{7}{8}$; circumference at base 24.

Suborder PROBOSCIDEA.

Family ELEPHANTIDÆ.

MASHONALAND ELEPHANT.

LOXODONTA AFRICANA SELOUSI.

Elephas africanus selousi, Lydekker, Proc. Zool. Soc. 1907, pp. 387 and 783; Game Animals of Africa, p. 4, 1908.

Lydekker in his original description gave the following information concerning this race:—"I think I am justified in regarding the Mashonaland Elephant as a distinct race, for which the name *E. africanus selousi* would be appropriate; the specimen in the Imperial Institute being regarded as the type.

"The race will be characterised by the ears being of considerable size, with the margin rounded, and the inferior lappet large, pointed, and extending inwards to some extent beneath the lower jaw and throat. In this respect they are unlike those of other East African Elephants. . . . ."

Typical locality, Mashonaland, Southern Rhodesia.

The characters that distinguish *selousi* from *capensis* do not appear to be of great systematic value; it is probable that the name *capensis* will eventually have to be used for this Mashonaland Elephant, the elephants from all the area south of the Zambesi being regarded as representing a single race.

443 —19. 7. 15. 523. Tusks and ears. 10 September, 1880. Lo Magondi's Kraal, Mashonaland, Southern Rhodesia. Length of tusks on outside curve 68 and $68\frac{1}{2}$; circumference $16\frac{1}{8}$; weight of each tusk 52 lb.

PART 2

EUROPEAN, ASIATIC, AND NORTH AMERICAN SPECIMENS.

Order CARNIVORA.

Family CANIDÆ.

ALASKAN TIMBER WOLF.

CANIS PAMBASILEUS.

Canis pambasileus, Elliot, Proc. Biol. Soc. Washington, vol. xviii. p. 79, 1905.

The general colour varies from almost black to a mixture of brownish black and white. No. 19. 7. 15. 5 is a very dark specimen, the entire coat being a deep sooty black; in No. 19. 7. 15. 4 the coat is very much lighter in colour, more as in *nubilus* *.

Typical locality, Sushitna River, Mount McKinley, Alaska.

444–445 —19. 7. 15. 4–5. Skins, mounted. 1906. South fork of MacMillan River, Yukon Territory.

Family MUSTELIDÆ.

Subfamily LUTRINÆ.

OTTER.

LUTRA LUTRA.

Mustela lutra, Linn. Syst. Nat. ed. 10, vol. i. p. 45, 1758; ed. 12, vol. i. p. 66, 1766.
Lutra vulgaris, Erxleben, Syst. Regn. Anim. vol. i. p. 448, 1777.
Lutra lutra, Lataste, Actes Soc. Linn. Bordeaux, vol. xxxviii. p. 34, 1884.

446 —19. 7. 15. 12 (female). Skin, mounted. August, 1894. Loch Spelvie, near Lochbuie, Isle of Mull.

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* *Canis nubilus*, Say, Long's Exped. Rocky Mountains, English ed. vol. i. pp. 155 and 333, 1823; Amer. ed. vol. i. p. 169, 1823.

Subfamily MUSTELINÆ.

PINE MARTEN.

MARTES MARTES MARTES.

Mustela martes, Linn. Syst. Nat. ed. 10, vol. i. p. 46, 1758; ed. 12, vol. i. p. 67, 1766.

Martes martes martes, Miller, Cat. Mamm. Western Europe, Brit. Mus. p. 372, 1912.

447 —19. 7. 15. 13. Skin, mounted. 27 October, 1870. Untersberg, Bavaria.

Family FELIDÆ.

CANADIAN LYNX.

LYNX CANADENSIS CANADENSIS.

Lynx canadensis, Kerr, Anim. Kingd. Systematic Cat. No. 298, described p. 157, 1792; True, Proc. U.S. Nat. Mus. vol. x. p. 9, 1887.

Lynx borealis canadensis, True, Proc. U.S. Nat. Mus. vol. vii. (1884) p. 611, 1885.

Lynx canadensis canadensis, Miller, List N. Amer. Mamm. p. 119, 1912.

A long-haired light-coloured Lynx without the distinct spotted marking of the European species. In both of the following specimens indistinct brownish spots are visible on the limbs.

Typical locality, Eastern Canada.

448 —19. 7. 15. 35. Skin, mounted. September, 1897. Near head of South Fork of Stinking Water River, Wyoming.

449 —19. 7. 15. 36 (female). Skin, mounted. November, 1898. North Fork of Stinking Water River, Wyoming.

Order UNGULATA.

Family BOVIDÆ.

Subfamily BOVINÆ.

AMERICAN BISON.

BISON BISON BISON.

Bison bison, Linn. Syst. Nat. ed. 10, vol. i. p. 72, 1758; ed. 12, vol. i. p. 99, 1766; Merriam, N. Amer. Fauna, No. 5, p. 81, 1891.

Bos (Bison) bison, Ward, Records of Big Game, ed. 6, p. 435, 1910.

Bos bison bison, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. i. p. 38, 1913.

The American Bison is represented in the Collection by a skull picked up near Cody City, Wyoming.

Horn measurements:—length on outside curve 18; circumference 12; greatest width inside $26\frac{1}{4}$; spread from tip to tip $23\frac{1}{2}$.

Typical locality, Texas.

450 —19. 7. 15. 38. Skull. November, 1897. Cody City, Wyoming.

Subfamily CAPRINÆ.

SARDINIAN MOUFLON.

OVIS MUSIMON.

Ovis musimon, Schreber (ex Pallas), Säugthiere, vol. v. pl. cclxxxviii. A, 1788.

Size small, height at shoulder about 27 inches. Horns of medium build, curving forwards, suggesting the condition met with in the Argali; good horns from 30 to $38\frac{1}{2}$ inches in length.

The best horns of the following series are those of No. 19. 7.

15.48:—length on front curve $25\frac{1}{2}$; circumference $8\frac{3}{4}$; spread from tip to tip $7\frac{1}{2}$.

Typical locality, Sardinia; the range includes Corsica.

451–454 —19.7.15.45–48. 1902. Sardinia.
455 —19.7.15.49 (sex not recorded). 1902. Sardinia.

WILD GOAT, or PASANG.

Capra hircus ægagrus.

Capra ægagrus, Erxleben, Syst. Regn. Anim. vol. i. p. 260, 1777.
Capra hircus var. *ægagrus*, Flower and Garson, Cat. Osteol. Mus. R. Coll. Surg. pt. ii. p. 251, 1884.
Capra hircus ægagrus, Lydekker, Wild Oxen, Sheep, and Goats, p. 260, 1898; Great and Small Game of Europe, etc., p. 151, 1901.

In the following series the finest horns are those of No. 19.7.15.50:—length on front curve $46\frac{1}{2}$; circumference $8\frac{7}{8}$; spread from tip to tip $18\frac{7}{8}$. The horns of the females are considerably smaller, No. 19.7.15.53 measuring as follows:—length on front curve $9\frac{1}{4}$; circumference $3\frac{3}{4}$; spread from tip to tip $4\frac{3}{4}$.

Typical locality, Daghestan district of the Caucasus, the range extending from this area through Asia Minor and Persia to Baluchistan and Sind.

456 —19.7.15.50. Skull and horns. 6 February, 1895. Maimun Dagh, Asia Minor.
457 —19.7.15.51. 8 February, 1895. Maimun Dagh, Asia Minor.
458 —19.7.15.52. 6 February, 1895. Maimun Dagh, Asia Minor.
459 —19.7.15.53 (female). March, 1897. Maimun Dagh, Asia Minor.
460 —19.7.15.54 (young male). 27 September, 1894. Mousa Dagh, south coast of Asia Minor.
461 —19.7.15.55 (female). 22 September, 1894. Mousa Dagh, south coast of Asia Minor.

Subfamily RUPICAPRINÆ.

CHAMOIS.

Rupicapra rupicapra rupicapra.

Capra rupicapra, Linn. Syst. Nat. ed. 10, vol. i. p. 68, 1758; ed. 12, vol. i. p. 95, 1766.

Rupicapra rupicapra, Weber, Säugetiere, p. 674, 1904.
Rupicapra rupicapra rupicapra, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. i. p. 181, 1913.

Of the following series the heads from Bavaria are two of the oldest specimens in the Collection, having been shot by Selous in the autumn of 1870, about a year before his first visit to South Africa.

The best horns are those of No. 19. 7. 15. 56, which measure as follows:—length on front curve 11; circumference $3\frac{3}{4}$; spread from tip to tip $4\frac{1}{8}$.

Typical locality, Switzerland; the range includes the Alps and Apennines, eastward through the Tirol, the Carpathians, and north part of the Balkan Peninsula to the Caucasus.

462–466 —19. 7. 15. 56–60. 12 December, 1899. Mount Tomassi, Southern Carpathians, Transylvania.

467 —19. 7. 15. 61 (female). 12 December, 1899. Mount Tomassi, Southern Carpathians, Transylvania.

468 —19. 7. 15. 62 (young male). 17 October, 1870. Untersberg, Bavaria.

469 —19. 7. 15. 63 (female). 28 October, 1870. Untersberg, Bavaria.

Family **ANTILOCAPRIDÆ.**

PRONGHORN, OR PRONGBUCK.

ANTILOCAPRA AMERICANA AMERICANA.

Antilope americana, Ord, Guthrie's Geography, 2nd Amer. ed. vol. ii. pp. 292 and 308, 1815.
Antilocapra americana, Ord, Journ. Phys. vol. lxxxvii. p. 149, 1818; vol. lxxxviii. p. 314, 1819; Oken's Isis, 1819, p. 1106.
Antilocapra americana americana, Miller, List N. Amer. Mamm. p. 393, 1912.

Horns differ from those of the *Bovidæ* in being forked and, as in the *Cervidæ*, being cast annually.

Height at shoulder about 36 inches. The typical race differs from the Mexican Pronghorn, *mexicana*, in its richer colour and larger mane. The narrowness of the blackish border of the ears

distinguishes it from the Californian form, *peninsularis*, in which race the ears have a deep black border.

The best of the two heads in the Collection is No. 19.7.15.442, which has horns of the following size:—length on outside curve 14; circumference $5\frac{1}{2}$; spread from tip to tip $10\frac{1}{4}$.

Typical locality, the Missouri Plains.

470 —19.7.15.442. 7 September, 1897. Near Marquette, Wyoming.
471 —19.7.15.443. November, 1898. Near Cody, Wyoming.

Family **CERVIDÆ.**

FALLOW DEER.

Dama dama.

Cervus dama, Linn. Syst. Nat. ed. 10, vol. i. p. 67, 1758; ed. 12, vol. i. p. 93, 1766.
Cervus (Dama) dama, H. Smith, Griffith's Animal Kingdom, vol. v. p. 306, 1827.
Dama dama, Lataste, Actes Soc. Linn. Bordeaux, vol. xxxix. p. 288, 1886.

The best of the three heads is No. 19.7.15.447, in which the antlers measure 26 inches in length on the outside curve, with a palm-width of $4\frac{1}{4}$ inches.

Typical locality, Sweden (introduced); the range appears to have been confined to the Mediterranean countries and Asia Minor, the present extension to Western Europe having been brought about by the species being introduced into this area.

472 —19.7.15.447. 5 October, 1898. Tatton Park, Cheshire.
473 —19.7.15.448. 4 October, 1898. Tatton Park, Cheshire.
474 —19.7.15.449. Haverholme, Lincolnshire.

RED DEER.

Cervus elaphus scoticus.

Cervus elaphus scoticus, Lönnberg, Arkiv Zool. vol. iii. no. 9, p. 11, 1906.

Horn measurements of No. 19.7.15.450:—length on outside

curve 32; circumference (between bez and trez tines) $4\frac{1}{8}$; widest spread inside 28; spread from tip to tip $23\frac{7}{8}$. Points 5 + 4.

Typical locality, Glenquoich Forest, Inverness.

475–476 —19. 7. 15. 450–451. 14 October, 1898. Ben Alder Forest, near Dalwhinnie, Scotland.

477–480 —19. 7. 15. 452–455. Monar Forest, Scotland.

EASTERN RED DEER, or MARAL.

Cervus elaphus maral.

Cervus maral, Ogilby, Rep. Council Zool. Soc. 1840, p. 22.

Cervus elaphus maral, Lydekker, Deer of All Lands, p. 75, 1898; Great and Small Game of Europe, etc., p. 217, 1901.

Size considerably larger than in the Red Deer, shoulder-height about 54 inches. Antlers larger, record length $48\frac{1}{2}$ inches. General colour reddish brown in summer, turning dark grey in winter, the shoulders, thighs, and belly becoming blackish brown.

Horn measurements :—length on outside curve $39\frac{3}{4}$; circumference (between bez and trez tines) $5\frac{3}{4}$; widest spread inside $36\frac{1}{4}$; spread from tip to tip 33. Points 8 + 7.

Typical locality, Caspian provinces of Persia; range from Caucasus through Galicia to Persia and Asia Minor.

481 —19. 7. 15. 456. 18 October, 1894. Ak Dagh, Asia Minor.

WAPITI.

Cervus canadensis canadensis.

Cervus canadensis typicus, Lydekker, Deer of All Lands, p. 96, 1898.

Cervus canadensis canadensis, Miller, List N. Amer. Mamm. p. 385, 1912.

Size very large, shoulder-height reaching 64 inches. Antlers distinguished from those of *elaphus* by their great size and with the upper half flattened; fourth and fifth tines very long, forming an almost symmetrical fork. Fine horns measure from 56 to 66 inches in length, with an outside width of from 50 to 60 inches.

Best horn measurements (No. 19. 7. 15. 458) :—length on out-

side curve 48; circumference (between bez and trez tines) $6\frac{1}{4}$; widest spread inside 43; spread from tip to tip 41. Points 7+7.

Typical locality, Eastern Canada; range includes the Rocky Mountains.

482 —19. 7. 15. 457. 30 October, 1897. Junction of Cabin Creek with the South Fork of Stinking Water River, Wyoming.

483 —18. 7. 15. 458. 29 October, 1897. Near Cabin Creek, South Fork of Stinking Water River, Wyoming.

484 —19. 7. 15. 459. 6 November, 1897. Rock Creek, near Ishawood, Wyoming.

485 —19. 7. 15. 460. 21 October, 1897. South Fork of Stinking Water River, Wyoming.

486 —19. 7. 15, 461. 2 October, 1897. South Fork of Stinking Water River, Wyoming.

487 —19. 7. 15. 462. 14 November, 1898. North Fork of Stinking Water River, Wyoming.

488 —19. 7. 15. 463. 18 October, 1897. East Fork of South Fork of Stinking Water River, Wyoming.

489–490 —19. 7. 15. 464–465. Wyoming.

MAINE WHITE-TAILED DEER.

Odocoileus virginianus borealis.

Odocoileus americanus borealis, Miller, Bull. N. York State Mus. vol. viii. p. 83, 1900; List N. Amer. Mamm. p. 386, 1912.

Odocoileus virginianus borealis, Stone and Cram, American Animals, p. 39, 1903.

The White-tailed Deer is distinguished from the other members of the genus *Odocoileus* by its longer tail and smaller ears. The present race differs from the typical one in being larger in size and greyer in colour.

Horn measurements:—length on outside curve 21; greatest width inside 17; spread from tip to tip 12. Points 4+4.

Typical locality, Hancock County, Maine; range from New England States and Canada to northern New York.

491 —19 7. 15. 466 (Immature male). 17 October, 1900. Snake Lake, Western Quebec, Canada.

KANSAS WHITE-TAILED DEER.

Odocoileus virginianus macrourus.

Cervus macrourus*, Rafinesque, Amer. Month. Mag. vol. i. p. 436, 1817.
Odocoileus americanus macrourus, Miller and Rehn, Proc. Boston Soc. Nat. Hist. vol. xxx. p. 14, 1901.
Odocoileus virginianus macrourus, Stone and Cram, American Animals, p. 39, 1903.

Smaller than *borealis* and the typical race; no black on face or tail. Antlers rather small.

Horn measurements:—length on outside curve $19\frac{1}{2}$; greatest width inside 15; spread from tip to tip 12. Points 5+5.

Typical locality, Plains of Kansas Valley, Upper Mississippi. The range is said to include Nebraska, Kansas, and the Dakotas.

492 —19. 7. 15. 467. 4 November, 1897. South Fork of Stinking Water River, Wyoming.

MULE-DEER.

Odocoileus hemionus hemionus.

Cervus hemionus, Rafinesque, Amer. Month. Mag. vol. i. p. 436, 1817.
Cervus macrotis montanus, Caton, Antelope and Deer of America, ed. 2, p. 94, 1881.
Mazama hemionus typica, Lydekker, Deer of All Lands, p. 275, 1898.
Odocoileus hemionus hemionus, Miller, List N. Amer. Mamm. p. 388, 1912.

Distinguished from the White-tailed Deer by its rather heavier build, large ears, and shorter tail, the basal portion of the underside of which is naked. Horns fairly large, directed outwards and then upwards, dividing to form a symmetrical fork, the branches of which divide again about 6 inches above the first fork.

Best horn measurements (No. 19. 7. 15. 471):—length on outside curve 25; greatest width inside $23\frac{1}{2}$; spread from tip to tip 19. Points 5+5.

Typical locality, Sioux Valley, South Dakota. In the Museum Collection there are specimens of this race from Montana and British Columbia.

* Misprinted *Corvus*.

493 —19. 7. 15. 468 (Young male). 29 September, 1897. Wind River, Wyoming.

494 —19. 7. 15. 469. 8 October, 1897. South Fork of Stinking Water River, Wyoming.

495 —19. 7. 15. 470. 4 October, 1897. South Fork of Stinking Water River, Wyoming.

496 —19. 7. 15. 471. 16 November, 1898. North Fork of Stinking Water River, Wyoming.

497 —19. 7. 15. 472. 20 November, 1898. North Fork of Stinking Water River, Wyoming.

498 —19. 7. 15. 473. 8 November, 1898. Near head of North Fork of Stinking Water River, Wyoming.

499 —19. 7. 15. 474. 6 November, 1898. North Fork of Stinking Water River, Wyoming.

AMERICAN ELK, OR MOOSE.

ALCES ALCES AMERICANUS.

Cervus americanus, Clinton, Letters on Nat. Hist. etc. p. 193, 1822.

Alces americanus, Jardine, Naturalist's Libr., Mamm. vol. xi. p. 125, pl. v., 1835.

Alces machilis americanus, Lydekker, Great and Small Game of Europe, etc. p. 46, 1901,

Alces alces americanus, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. iv. p. 234, figs. 36 and 37, 1915.

Antlers of the palmated type; body larger than in typical race.

Horn measurements (No. 19. 7. 15. 475):—length of horn to longest tine 35½; greatest width 48; breadth of palm 7; spread from tip to tip 33½. Points 10+8.

Typical locality, Eastern North America.

500 —19. 7. 15. 475. 1 October, 1900. Lake Kippewa, Western Quebec, Canada.

501 —19. 7. 15. 476. Canada.

ALASKAN MOOSE.

ALCES ALCES GIGAS.

Alces gigas, Miller, Proc. Biol. Soc. Washington, vol. xiii. p. 57, 1899; List N. Amer. Mamm, p. 391, 1912.

Alces machilis gigas, Lydekker, Great and Small Game of Europe, etc. p. 49, 1901.

Alces alces gigas, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. iv. p. 237, fig. 39, 1915.

Larger and darker in colour than *Alces alces americanus*. Good horns measure from 60 to 75 inches in width; in the record head the width is as great as 78½ inches.

Horn measurements (No. 19. 7. 15. 478):—length to longest tine 40; greatest width across horns 67; circumference 8½; palm-width 20; spread from tip to tip 43. Points 17+21. This specimen measured 6 feet 11 inches at the shoulder.

Typical locality, Kenai Peninsula, Alaska.

502 —19. 7. 15. 477. 8 September, 1904. North Fork of Macmillan River, Yukon Territory.

503 —19. 7. 15. 478. 18 September, 1904. North Fork of Macmillan River, Yukon Territory.

504 —19. 7. 15. 479. 7 September, 1906. Mountains between Forks of Macmillan River, Yukon Territory.

505 —19. 7. 15. 480. 15 September, 1906. South Fork of Macmillan River, Yukon Territory.

REINDEER.

Rangifer tarandus tarandus.

Cervus tarandus, Linn. Syst. Nat. ed. 10, vol. i. p. 67, 1758; ed. 12, vol. i. p. 93, 1766.

Rangifer tarandus typicus, Lydekker, Deer of All Lands, p. 38, 1898.

Rangifer tarandus tarandus, Lydekker, Cat. Ungulate Mamm. Brit. Mus. vol. iv. p. 241, 1915.

The smaller and more slender, subcylindrical antlers at once distinguish the Reindeer from the Newfoundland and Yukon Caribou.

The best horns in the series are those of No. 19. 7. 15. 496, which have the following measurements:—length on outside curve 51; spread from tip to tip 31; greatest width inside 42; circumference 5¼. Points 6+12.

Typical locality, Swedish Lapland. Formerly found over a large area of the Scandinavian Peninsula; in the wild state it now only exists in certain localities in Norway.

506–510 —19. 7. 15. 495–499. 1907. Near Lyseheien, Norway.

NEWFOUNDLAND CARIBOU.

Rangifer tarandus terræ-novæ.

Rangifer terræ-novæ, Bangs, Descript Newfoundland Caribou, Boston, 1896.
Rangifer tarandus terræ-novæ, Allen, Bull. Amer. Mus. Nat. Hist. vol. viii. p. 235, 1896.

Antlers massive and much palmated, with a large number of points. General colour paler than in the following race.

Among the heads in the Collection there is one (No. 19.7.15.482) with exceptionally beautiful horns, bearing no less than 40 points; the measurements of this specimen are as follows:—length on outside curve $40\frac{1}{4}$; circumference 8; greatest width inside $36\frac{1}{2}$; spread from tip to tip $28\frac{1}{2}$. Points 21+19.

Typical locality, Newfoundland, to which Island the race is confined.

511 —19.7.15.481. 2 November, 1900. Terra Nova Lake, Newfoundland.

512–515 —19.7.15.482–485. September, 1901. St. John's Lake, Newfoundland.

516 —19.7.15.486. 20 October, 1905. King George IV Lake, Newfoundland.

517 —19.7.15.487. 23 October, 1905. Lloyds Lake, Exploits River, Newfoundland.

518 —19.7.15.488. 1 November, 1905. Mount Ramsay, Exploits River, Newfoundland.

OSBORN'S CARIBOU.

Rangifer tarandus osborni.

Rangifer osborni, Allen, Bull. Amer. Mus. Nat. Hist. vol. xvi. p. 149, figs. 1 and 2, 1902.
Rangifer tarandus osborni, Ward, Records of Big Game, ed. 6, p. 85, 1910; ed. 7, p. 85, 1914.

Antlers rather of the Barren-Ground type, but considerably greater in size; general colour darker than in the Newfoundland race.

The following series contains some very fine heads, the best being No. 19.7.15.494:—length of horns on outside curve $57\frac{1}{4}$;

greatest width inside $47\frac{1}{4}$; circumference 7; spread from tip to tip $42\frac{1}{4}$. Points 13+15.

In the Museum Collection there is an entire mounted specimen of this Caribou presented by Selous in 1907.

Typical locality, Cassiar Mountains, British Columbia.

519 —19.7.15.489. 29 August, 1906. Mountains south of South Fork of Macmillan River, Yukon Territory.

520 —19.7.15.490. 12 September, 1906. Mountains south of South Fork of Macmillan River, Yukon Territory.

521 —19.7.15.491. 30 August, 1906. Mountains south of South Fork of Macmillan River, Yukon Territory.

522–523 —19.7.15.492–493. September, 1906. Mountains south of South Fork of Macmillan River, Yukon Territory.

524 —19.7.15.494. 10 September, 1904. Mountains between Forks of Macmillan River, Yukon Territory.

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